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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

Before The Honorable James Donato, Judge

IN RE GOOGLE PLAY STORE ANTITRUST LITIGATION,) NO. 21-md-02981-JD

THIS DOCUMENT RELATES TO:

EPIC GAMES, INC.,

Plaintiff,

VS.) NO. 20-cv-05671-JD

GOOGLE, LLC., et al.,

Defendants.

San Francisco, California
Thursday, May 23, 2024

TRANSCRIPT OF PROCEEDINGS

APPEARANCES:

For Plaintiff:

CRAVATH, SWAINE & MOORE LLP
825 Eighth Avenue
New York, New York 10019

BY: **GARY BORNSTEIN, ATTORNEY AT LAW**
YONATAN EVEN, ATTORNEY AT LAW
LAUREN MOSKOWITZ, ATTORNEY AT LAW
MICHAEL ZAKEN, ATTORNEY AT LAW
MALIKAH WILLIAMS, ATTORNEY AT LAW

(APPEARANCES CONTINUED ON FOLLOWING PAGE)

Reported By: Ruth Levine Ekhaus, RMR, RDR, FCRR
Official Reporter, CSR No. 12219

APPEARANCES CONT'D:

For Defendants:

MUNGER, TOLLES & OLSON LLP
350 South Grand Avenue - 50th Floor
Los Angeles, California 90071
BY: **GLENN POMERANTZ, ATTORNEY AT LAW**
KURUVILLA J. OLASA, ATTORNEY AT LAW

MUNGER, TOLLES & OLSON LLP
601 Massachusetts Avenue NW
Suite 500 East
Washington, DC 20001
BY: **JONATHAN KRAVIS, ATTORNEY AT LAW**
LAUREN BELL, ATTORNEY AT LAW

MUNGER, TOLLES & OLSON LLP
560 Mission Street - 27th Floor
San Francisco, California 94105
BY: **DANE P. SHIKMAN, ATTORNEY AT LAW**

MORGAN, LEWIS & BOCKIUS LLP
One Market - Spear Street Tower
San Francisco, California 94105
BY: **SUJAL SHAH, ATTORNEY AT LAW**
LEIGHA BECKMAN, ATTORNEY AT LAW

HOGAN LOVELLS US LLP
555 13th Street N.W
Washington, D.C. 20004
BY: **REEDY SWANSON, ATTORNEY AT LAW**

Also Present: **Michael Lyons**
Douglas Bernheim
Steven Tadelis
Matthew Gentzkow
Gregory Leonard

Thursday - May 23, 2024 11:10 a.m.

P R O C E E D I N G S

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THE CLERK: All rise. Court is now in session. The Honorable James Donato presiding.

THE COURT: Good morning.

ALL: Good morning.

THE CLERK: Please be seated.

Calling Civil 20-5671 Epic Games, Inc., v. Google, LLC, and Multi-District Litigation 21-2981, In Re: Google Play Store Antitrust Litigation.

Counsel.

MR. BORNSTEIN: Good morning, Your Honor, Gary Bornstein for Epic Games. I am joined today back in the gallery by Yonatan Even, Lauren Moskowitz, Michael Zaken, and Malikah Williams.

THE COURT: Okay.

MR. POMERANTZ: Good morning, Your Honor, Glenn Pomerantz on behalf of Google. And with me, not at counsel table Leigha Beckman, Dane Shikman, Kuru Olasa, Jonathan Kravis. Sujal Shah, as well, Your Honor.

THE COURT: Okay. It's a partner name test.

(Laughter.)

THE COURT: All right. We're all set?

MR. BORNSTEIN: Yes, Your Honor.

THE COURT: Who did we have at the table? I know the two economists and --

MR. BORNSTEIN: And Mr. Lyon will not be speaking, but. He is here in case we need some technical assistance.

THE COURT: Okay. Let's just introduce who's sitting at the table, please. Why don't we start with you.

MR. BORNSTEIN: Great. On our side, we have Professor Steven Tadelis and Professor Douglas Bernheim.

THE COURT: Okay.

MR. POMERANTZ: We have here, Your Honor, Professor Mathew Gentzkow and Dr. Greg Leonard.

THE COURT: All right. So we're going to do this in a hot tub style. So, Lawyers, you two can return to the bench. And let me put a frame on what we're doing.

So today I've asked you in to take testimony on the injunctive relief that I'm going to order in the wake of the jury verdict. Now there are going to be two principles, two broad principles that guide our discussion today. And the first principle is:

We are not writing on a clean slate. The jury has concluded that Google monopolized illegally the Android app distribution market and the Android in-app billing services market for digital goods. The facts and the evidence behind the jury's verdict are now carved in stone. This is not an opportunity to argue with that record, to try to supplement it,

to try to get around it, tap dance on it, or anything else. It is here and it is here to stay.

I was a little concerned about Google's 90 pages of objections to the proposed injunction that the plaintiffs submitted because it came perilously close to crossing that line on several occasions. But we will not be doing that today.

Now, there may be some fact disputes that are specific to the relief that I need to decide. I'll tip my hand a little bit and tell you right now, the friction related to the security screens may be one of them that was not in it. We heard a lot about it a trial. That was not an issue that the jury necessarily had to decide.

So I may end up having to do some relief-specific dispute resolution, but that is it. We are not in any way rewriting history or revisiting what led to the jury's verdict of illegal monopolization.

The second guideline is, I'm going to share with you the legal standards I'm working under. And I know you-all economists aren't lawyers, but you need to know what I'm going to be doing because this is how I'm going to hear what you're saying to me. And I have picked, out of a number of sources, a formulation that Justice Douglas gave in *Ford Motor Company v. United States*, 405 U.S. 562 at pages 577, 578, and that's from 1972.

And Justice Douglas formulated the relief task as this (as read):

"Antitrust relief should unfetter a market from anticompetitive conduct and pry open to competition a market that has been closed by defendant's illegal restraints."

That is the lens through which I'm going to be taking your testimony today.

To put a little bit of a finer point on it, our circuit recently held in a case called *Optronic Technologies, Inc., v. Ningbo* -- N-I-N-G-B-O -- *Ningbo Sunny Electronic Company*, 20 F.4th 466 at page 486. This is a 2021 case. (as read):

"If the jury finds that monopolization or attempted monopolization has occurred, the available injunctive relief is broad, including to terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future."

So those are my goals. You're going to help me make my decision about what I should or should not do to realize the legal standards that I'm operating under.

Now, the other thing I want to mention -- it goes without saying, but I think it's important to emphasize -- this case is about the opportunity to compete generally; it is not about

aiding a specific competitor for or potential competitor. I am not looking for relief that's going to give a helping hand just to Epic. That is not what I'm doing. That's the wrong thing to do.

What we are doing is leveling the playing field, lifting the barriers, and making sure that anybody who chooses to compete with Google in these two markets found by the jury has a free and unfettered opportunity to do so.

That is what I'm looking for. So it is a systemic remedy.

Now, I am going to turn it over to each of you. We're going to, as I said -- I know at least a couple of you were here for the prior hot tub -- start with the plaintiffs and we'll get a response from the defendant as kind of we go down this. But here is what I'm looking for: I'm looking for specific actions.

All right?

I thought, to be honest, the draft -- proposed draft injunction from Epic was too open-ended for my taste. That's not something -- it's not a criticism, but I'm telling you what I need is specific recommendations for action that are directed to two things: Terminating Google's illegal conduct -- all right? -- making sure that door is closed. Everything that led up to the antitrust verdicts.

And the second thing is: What should be done in addition to that to restore the opportunity to compete for all potential

competitors.

All right? Those are the two touchpoints that I want you to -- as you talk today and discuss this, keep that in mind.

Okay? So specificity is what I'm looking for -- all right?-- to the extent you can do it.

Okay. Now, it seems to me -- I don't want to in any way constrain your testimony. It seems to me that identifying what we can proscribe as prior conduct might be relatively easy. By that, I have in mind specific contractural provisions that we heard a lot about at trial, for example.

The next step, you know, what to do to make sure that Google doesn't keep the fruits of its illegal conduct and doesn't continue to poison the well in the future might be a little bit more broad. Okay?

But let me start with the plaintiffs. You can just dive right in.

DR. BERNHEIM: Okay. Thank you, Your Honor. I am Douglas Bernheim.

THE COURT: Okay. And before we do that, let me -- because we're already broadcasting on Zoom. The two cameras should be facing the two witnesses. So one, I think, is facing the podium right now. So maybe Mr. Bornstein can help reorient that and maybe have to lower it a little bit.

Yeah. That'd be great.

And then Mr. Pomerantz can do the same for -- good. Okay.

Can we look on the screen, Lisa, and make sure that they're looking right? Okay. That looks pretty good. Okay.

All right. And just when you speak -- I know there's only one microphone, but if you have to pass it back and forth, that would be great. Okay.

Please go ahead, Professor.

DR. BERNHEIM: Of course. Thank you.

So I have prepared some slides that are -- well, frankly, I think they're more for helping me with memory, but it may be useful for you to be able to see them, too, because they have terse summaries of the points that I'm making.

So, Mr. Lyon, could you put up Slide Number 3?

THE COURT: Is there a hard copy I could get, or no?

DR. BERNHEIM: There is. We can provide it. I'm sure we can.

THE CLERK: Do we have two hard copies?

THE COURT: Two, if you have them, but at least one, please.

Don't give me yours.

DR. BERNHEIM: I have two.

THE COURT: You do? Okay. That would be great. Thanks.

All right. Thank you. Okay.

Dr. Bernheim, go ahead.

DR. BERNHEIM: All right. So this slide just lists

the categories of things that we think a remedy needs to do beginning with Item Number 1 -- is to prohibit the specific anticompetitive practices. But a remedy that focuses very narrowly, just on those specific things, is going to be easily circumvented. So the remedy needs to preclude categories of things, and I'll be more specific about that, what those categories are in a minute.

So that's the -- Point Number 2. It must preclude related conduct that could yield substantially similar outcomes.

Third, it has to give rise to an opportunity to compete on the merits with Google Play, despite the ongoing competitive advantages that Google Play enjoys by virtue of its past anticompetitive action, because there are durable effects of that on competition going forward.

And the last principle just says that, to the extent possible, we should avoid inhibiting Google from competing on the merits.

So the next slide, Slide Number 4, gives a high-level summary of what the components of the remedy are. And then just to look forward, if you look at the next few slides -- so, for example -- I'm sorry.

On Slide 4, the first point is to prevent Google from entering into or enforcing agreements of the type the jury found to impair competition.

The next slide has that as its title. That would be Slide

Number 5. And it lists the specific things that we think fall into that category.

And then there's a slide for each of the other points on Slide Number 4.

So Number 1, preventing Google from entering in or enforcing agreements of the type that were found to impair competition.

Second, to prevent Google from imposing undue restrictions on direct downloading.

Third, to require nondiscriminatory access to Android and other Google products and services, because that's another possibility for circumvention if Google were to make those things contingent --

THE COURT: So is that just -- is that the security friction point?

DR. BERNHEIM: It's also possibly access to APIs.

THE COURT: Okay.

DR. BERNHEIM: Which are not currently conditional but could be made conditional.

THE COURT: All right.

DR. BERNHEIM: And then the final point is to mitigate the continuing competitive advantages, which we have several provisions designed to address those.

So I'm not sure if it's best to walk through every one of these points --

THE COURT: You know, I have the draft. I've studied it quite a bit. I would like to get just to the specifics.

DR. BERNHEIM: Okay.

THE COURT: You can use your topic headings. That's actually useful. But how -- what would you stuff under Number 1, for example?

DR. BERNHEIM: Okay. So let me -- let me make what I think is the most useful characterization of what's included under Number 1.

What we are concerned about is two types of conduct:

The first type of conduct is conduct that makes value -- which could be financial value, it could be other value -- conditional upon another party either dealing with a Google Play rival or acting as a Google Play rival.

And this sort of conduct, for the most part, is easy to identify because the agreements would have provisions in them that reference rivals. Okay? They would say these things are conditional in some sense.

It gets a little bit tricky because in some cases conditionality can be established by a nod and a wink, and -- particularly, if a party has a lot of power, if they're dominant in the market and parties are worried about pleasing them.

So we add one more thing: Beyond this, you can't write things that are conditional upon -- you know, value can't be

conditional upon dealing with a rival or acting as a rival. We also suggest that the remedy should include the requirement that these agreements have an explicit provision that says, "No terms or conditions or renewal are conditional upon dealing with a rival or acting as a rival," so that the counterparty, if it's an OEM, if it's a developer, they know that's in the contract; they have recourse and they have reassurance.

THE COURT: All right. Now, let's just tie this a little bit to the trial evidence that I hope you recall.

DR. BERNHEIM: Yes.

THE COURT: So the MADA and RSA agreements, as I recall, arguably had clauses about not doing business with rivals or putting Google in a position where it always came out first if there was some dealing with a rival, a home screen or priority.

So what specifically -- keeping those actual contracts that we heard about at trial in mind, how would you formulate a proscription related to those?

DR. BERNHEIM: Well, I think you can formulate a broad proscription that doesn't need to specify every specific category of conduct because there are a lot of categories of conduct, and there are other things that Google could turn to.

So the ideal, in my mind -- and I'm talking as an economist now --

THE COURT: Of course, yes.

DR. BERNHEIM: The ideal, in my mind, would be to have a provision that simply says broadly, "The agreements with parties like OEMs, developers, others who might be distributors, cannot include provisions that specify terms that are conditional on dealings with a rival or acting as a rival."

THE COURT: All right. Well, can't it be conditional on excluding a rival?

DR. BERNHEIM: Well, that would be -- that would be -- excluding a rival would be the most extreme example. But another example would simply be if you deal with a rival, then you're not going to have access to certain things that are valuable.

That would be a concern that Google could begin to use that strategy.

THE COURT: So maybe one way to put it would be: Cannot be conditioned on agreements with rivals or potential rivals.

Just leave it at that.

DR. BERNHEIM: Yes. That's essentially what -- what this is trying to get at. And I'm not sure exactly what the wording should be, but if the provision is crafted in a relatively broad way, it's still specific. It still says that a violation would have to be -- to have a violation, you'd have to be able to point to a provision in a contract that explicitly references some sort of dealings with a rival.

THE COURT: And in your review as an economist, that would directly redress the contractual restrictions that the jury saw at trial?

DR. BERNHEIM: Yes, with one category of exceptions that I'm coming to.

THE COURT: Okay.

DR. BERNHEIM: And the second category is the sharing Google Play --

THE COURT: If I may just jump in -- so we really need to tie all of this to the anticompetitive conduct that was proven at trial.

DR. BERNHEIM: Right.

THE COURT: So that's why I'm going to ask you to make sure that everything you tell me is, in fact, economist response --

DR. BERNHEIM: Yes.

THE COURT: -- to the anticompetitive conduct, contract agreements, and other conduct that we saw at trial.

Okay?

DR. BERNHEIM: Yeah. So a great example of this first thing, the conditionality, is the RSA 3.0 agreements that said to the OEMs, "Your compensation, your payments are going to be different if you -- if you have -- if you preload a rival app store."

That's a perfect example of a conditional provision in an

agreement. And I think one could broadly say that such conditional provisions that reference dealings with rivals or activities as rivals, are contrary to the remedy. And that would not just deal with a lot of what we saw, that Google did, at trial, but would also encompass alternatives that Google might think about going to.

THE COURT: Before we get to that next point, though, let's define "rival."

So a rival would be who?

A company seeking to open a competitive -- seeking to open an Android app store?

DR. BERNHEIM: That would be the main class of rivals.

In principle, it could be if a developer is distributing off Google Play, then it is acting as a rival for the purpose of its own distribution, even though it doesn't have its own app store. And the -- what would be required is a provision that says, "Google cannot make value that it gives to that developer" --

THE COURT: If I may -- I'm going to interrupt you a lot. I apologize in advance.

So I see. So it doesn't have to be opening up -- I'll just call it a macro store. It can be one developer saying, "I want my app to be available through my own direct download or through Samsung" or something like that.

That would be, in your view, also a rival?

DR. BERNHEIM: Yes. I think that that's important. These are all activities that are rivalrous in terms of app distribution, and we're only talking about rivalry in terms of app distribution, so this ought to be focused on that. But -- yes, that's the essence of it.

THE COURT: You said you had something else, a carve-out or something --

DR. BERNHEIM: Yes. The other -- it's not a carve-out. It's another category of conduct that arose at trial, which is sharing Google Play revenues with actual or potential competitors. And even when Google does not have explicit provisions in contracts that reference activities as -- as rivals or dealings with rivals, app distribution rivals. It also has --

THE COURT: Was Activision -- what were the examples at trial of that? I remember --

DR. BERNHEIM: This would be RSA 3.0, revenue sharing, Google Play revenue sharing. Now, in the RSA 3.0 agreements, there were various different kinds of revenue sharing. Sometimes they shared, I don't know, search revenue, ad revenue, something like that and occasionally Google Play revenue.

And the sharing of Google Play revenue was coming up in the context of OEMs that had their own app stores, which was essentially sharing profits with a rival. This is, you know,

kind of basic violation of antitrust principles.

Nothing was made conditional on the -- well, I'm sorry. The RSA 3.0 also had some conditionality. But for this provision, even aside from the conditionality, sharing profits with a rival discourages the rival from competitive action.

THE COURT: Sharing Play Store profits.

DR. BERNHEIM: I'm sorry?

THE COURT: Sharing Google Play Store profits.

DR. BERNHEIM: Specifically Play Store profits.

THE COURT: All right. So that is your formulation of how to address the prior anticompetitive conduct that led to the jury verdict?

DR. BERNHEIM: Yes, as well as similar conduct that could be used to accomplish the same objective.

THE COURT: All right. Let me just turn to your colleagues here.

What's wrong with that, Defendants? It sounds fairly reasonable and well-targeted to the evidence at trial.

DR. GENTZKOW: Yeah, I think --

THE COURT: Why don't you say who you are.

DR. GENTZKOW: Matthew Gentzkow.

So we, I think, broadly agree on some of the high-level principles that this should address the conduct that was found to be illegal at trial. I think it's important that it do so in a way that lets market outcomes be determined by competition

and market forces when possible.

I think that it's important, as Dr. Bernheim and Dr. Tadelis have both said, that it preserve Google's ability to compete in the market to the extent possible.

I think there's two main areas of disagreement. One of them is with regard to some of the provisions that Dr. Bernheim has described as leveling the playing field, which we haven't really gotten to yet --

THE COURT: All I want you to do now is -- you know, Dr. Bernheim said, "Here's what I would recommend, to terminate the illegal conduct underlying the jury's monopolization verdict."

So what I'm asking you is: Is there any objection to that?

It sounded all quite straightforward. I don't see how that would hobble Google's ability to compete in a fair way, but you tell me.

DR. GENTZKOW: I think the first thing to say is that the state settlement already rules out any exclusivity agreement.

THE COURT: There is no state settlement because I haven't approved it. So let's just stick with this case.

DR. GENTZKOW: The one thing that I think would be an appropriate remedy is, as is in the state settlement, ruling out exclusivity of either pre-installation or placement on home

screens of devices, those kinds of contracts that are explicitly conditioned on the behavior of rivals.

I think that where we disagree is the breadth of that provision, how far it goes and what other conduct should be ruled out. I think that the -- the proposed injunction spans conduct that even would disincentivize a rival in any way from --

THE COURT: Let me just jump in.

Let's just focus on what we're talking about here. Okay?

So let's see if I can put a clearer articulation.

Dr. Bernheim has just proposed, in response to my question, two categories of things that should be proscribed, in other words, Google should be forbidden to do.

One is: It cannot condition any of its agreements with a party on not dealing or having agreements or interactions with rivals or potential rivals, and it can't engage in revenue sharing from the Google Play Store with competitors.

So just focusing on those two things, I don't see any reason why that would in any way unduly or unreasonably constrain Google's ability to compete, while at the same time, those provisions seem well-crafted to the evidence at trial to correct the illegal conduct that led to the monopoly verdict. So that's what I want you to kind of focus on.

DR. GENTZKOW: So I think on the sharing of revenue from the Google Play Store, the question is to what extent that

prohibits conduct that would fall within the bounds of competition. So there are a lot of cases in which it makes sense for Google to offer to, for example, OEMs, when it's competing for space on their devices, incentives to choose the Play Store to install the Play Store. That has taken the form of revenue-sharing contracts in the past, and those revenue sharing contracts involve incentives for those OEMs to install Google Play Store.

THE COURT: But isn't that incentive based on not installing a rival store? I mean, that's the whole point of the incentive; right?

DR. GENTZKOW: Well, not necessarily. I think that's the crux of the question is: What about incentives that are not conditioned on anything about the behavior of rivals?

I think if we narrowly --

THE COURT: Just to jump in, I'm looking in a pragmatic way as what is the consequence. Okay?

So, you know, someone may say, "Oh, this is revenue sharing with an OEM because we want to be on the home screen."

But if the practical effect is the revenue sharing is essentially motivating an OEM not to put a rival play store on, you have achieved an anticompetitive goal, even though it may be cloaked in a competitive-phrased way.

So looking at the actual result, help me understand how revenue sharing from the Google Play Store with a potential

competitor that results in the competitor not posting a rival play store is not a reasonable way of constraining anticompetitive conduct.

DR. GENTZKOW: Yeah. I think that -- I think that banning that kind of revenue sharing has the potential to harm those OEMs. Because although there could be cases where that is excluding a competitor, there's a whole range of cases in which that is a form of competition. And --

THE COURT: What's a form of competition?

DR. GENTZKOW: That offering revenue sharing to OEMs in exchange for placing a play store, if there's no reference to rivals, ruling that out entirely, has the potential to shut down competition much more broadly in the market and harm competition because there are lots of cases in which OEMs have scarce real estate on their devices that is -- that app stores are competing for placement on those devices. And if this is -- if we say there's no ability to offer revenue sharing at all in part of that competition, competition is going to be weakened as a result.

THE COURT: All right. Let's pause on that.

Dr. Bernheim, your colleague is saying that it's too broad. They should be allowed to revenue share because there are totally legitimate reasons for that.

DR. BERNHEIM: Well, I disagree with that.

Dr. Gentzkow, in his testimony just now and in his

declaration in making that argument, doesn't explain what the harm would be if the compensation to the OEM is something other than Google Play revenues.

As I said before, they can share other revenue streams, so they can make payments for various things. I mean, we're proscribing some things, payments for things that are conditional on dealing with a rival. But to the extent they are allowed to do something, they can bid for that with other revenue streams. It doesn't have to be Google Play revenue.

And I would add to that --

THE COURT: So you're really anchoring it to the source of the revenue coming from Google Play.

DR. BERNHEIM: For that, again --

THE COURT: The revenue sharing.

DR. BERNHEIM: -- two categories of conduct. But if we're talking about revenue sharing, what we're worried about is Google Play revenue because Google Play is functioning as a competitor in the app distribution market, and therefore should not be allowed to share its revenues or profits with other competitors in the app distribution market. That's -- that's the line.

The other thing that I would point out is that -- at trial I think I talked about this -- I've looked at the agreements with the various OEMs, and the thing that's really striking is that Google Play -- Google used various kinds of compensation.

They shared various different kinds of revenue streams.

Where you see them sharing Google Play revenue -- particularly Google Play revenue at high rates -- is when you have the, you know, the Chinese OEMs, like Xiaomi, coming up and having their own apps stores. And all of a sudden, Google says, "Well, how about some -- how about a larger share of Google Play revenue?"

This is the problem. It's not that they're giving the OEMs money. It's that they're either giving the OEMs money specifically not to foster competition, or they're giving them money in the form of the revenue stream that the OEMs should be competing with.

THE COURT: Okay. Seems like a reasonable point, Dr. Gentzkow.

DR. GENTZKOW: Yeah. Well, I think --

THE COURT: That would address your issue. As Dr. Bernheim is articulating it, Google would be perfectly free to bargain for home screen territory or whatever they want to do as long as it doesn't come from Google Play store revenue.

DR. GENTZKOW: Yeah. I think if we've narrowed the scope of it in that way, so that any other revenue sharing is acceptable, and any other conduct outside of that, which is not revenue sharing but other forms of incentives that are part of competition, are acceptable, I think we're closer to agreement.

I think Google Play Store revenue --

THE COURT: Now you're talking like a lawyer.

Do you have an agreement or not as economists?

(Laughter.)

DR. GENTZKOW: Yeah. I think the disagreement is just there are conditions -- there are cases in which sharing revenue from the Google Play Store is also consistent with efficiency because the -- from an economic point of view, revenue sharing, in general, gives incentives to the counterparty -- in this case, the OEM -- to make investments, to do promotions, to work hard, to create more value out of that relationship.

Google Play revenue is one of the main ways that an Android device produces revenue overall. There's search advertising revenue. There's revenue from the Google Play store.

From an economic point of view, limiting that has a potential efficiency consequence because if there are investments that an OEM makes that lead a user to download more apps, to spend more time on their phone, to make more purchases in apps, those are going -- the OEM is going to have less incentive to do those things under a revenue-sharing contract if it doesn't include Google Play revenue.

So I think there are efficiency reasons why that kind of revenue sharing makes sense as well.

THE COURT: Okay. Let me ask you, leaving revenue

sharing aside, the other point from Dr. Bernheim was just making sure that no agreement is conditioned on not dealing with rivals, basically.

What's wrong with that? I mean, that's actually -- it's an independence clause; let's call it that. Each contract will have to have an independence clause saying you're perfectly free to deal with anybody else on any terms you want.

DR. GENTZKOW: Yeah. I think that, again, if -- that becomes very close to the terms that are already in the state settlement which says you can't -- Google cannot make any agreements with an OEM, for example, that explicitly reference rivals in the context of exclusivity. So say --

THE COURT: All right. So, in other words, you agree that that's an okay provision.

DR. GENTZKOW: I think that's an okay provision in the context of exclusivity.

THE COURT: All right. Okay.

That seems to be Category 1 for proscribing prior conduct.

Now, looking more broadly, how do you address those other factors that I've read from the cases about, which is, making sure that Google does not continue to reap fruit from its statutory violations and give some assurance to the public this isn't going to happen again, in creative ways?

That -- admittedly, I'm going to have a hard time predicting, but there may be some formulations that will at

least cabin the creativity in some constructive way.

Yes. Yeah.

DR. BERNHEIM: So I think my starting point is that if you eliminated all of the conduct that we observed in the past, as well as similar conduct, if you just proscribe that and nothing else, that would not be sufficient because had it not been for the conduct, we would have seen competition emerging. We would be in a different place today, in 2024, than we would have been -- than we actually are in 2024 as a result of the past conduct.

And merely removing the conduct doesn't mean that competition bursts out all of a sudden. It takes time to evolve for a number of reasons -- one of which I'll get into in a second.

So, you know, if all you did was prohibit these categories of conduct, you're not going to get to where we would have been in 2024. And you're not going to get to where we would have been in 2026, when 2026 arrives. You know, you're going to be in a lower trajectory in terms of competition.

Part of the reason for that is -- a large part of the reason for that is that Google has -- Google Play has inherent advantages because of the phenomena that we discussed at trial called network externalities, the chicken and the egg problem.

As an app store I need users to get developers. I need developers to get users. If I'm the dominant app store and I

have both, both are kind of going to stay there. If I don't have either, it's hard to get the ball rolling. There are strategies that I talked about at trial, like getting some exclusive conduct -- content that will help get the ball rolling.

But it's slow. It takes time. It's difficult. And it's not just a matter of not having resources, not having money available; it's a matter of laboring at a competitive disadvantage relative to the party that benefits from all of these network externalities.

The important point about that is that those advantages exist in significant part because of past conduct. Past conduct is what creates the dominance that we observe today, that thereby creates the network externalities that make it hard for competitors to break in to compete today.

So in my view, one of most important things that we need to do is to find a way to mitigate the network externalities, and we've offered, I think, a simple and creative proposal for doing that. And part of the beauty of this proposal is that it is built on something that Google has already done, which is its Alleyoop arrangement with, I think it was, Facebook and one other party.

And that's basically saying, you can have another distributor of apps, say another app store that uses -- that serves -- that may have its own products but also serves as a

storefront for Google Play. So if they've not signed up a developer, they can still piggyback on the Google Play catalog and list those apps on their own app store.

THE COURT: If I can just jump in --

DR. BERNHEIM: Yes.

THE COURT: This gave me a little bit of pause, and I'll just -- I'll tell you why. And I'm speaking, of course, as a federal judge, not as an economist, but the app store's dominance, as the jury found, was directly correlated and caused by some illegal antitrust conduct.

However, it certainly is a possibility and, in my mind, a probability that there was perfectly legitimate conduct that also led to the app store being the biggest player in town.

I'm a little reluctant to say -- if I'm understanding you correctly, and please correct me if I'm not.

I'm a little reluctant to say anybody tomorrow can say, "I'm going to open an Android App Store and, Google, you stock my catalog with everything you are offering today for free, and you will never realize a penny of profit from any sales that -- or any billing that goes through my app store."

I just -- how do you -- that seems a bit overbroad.

DR. BERNHEIM: Wait, wait, wait. I'm --

THE COURT: How is Google going to --

DR. BERNHEIM: If I've understood you, the last thing you said sounds like it's not the remedy that we proposed. So

let me just restate --

THE COURT: Oh. All right. But access to -- letting a third party, tomorrow, have complete access to all the apps currently available in the Google Play Store is part of your proposal.

DR. BERNHEIM: It is. But all of the revenues go to Google Play.

THE COURT: Oh, I missed that part. All right. Tell me about that.

DR. BERNHEIM: This is very important.

THE COURT: Yes.

DR. BERNHEIM: That's what I meant by it only being a storefront.

So they get to basically port the Google Play catalog onto their store, list all those apps. If they've not established a direct relationship with a developer, then this is all just piggybacked on Google Play. The sale is at Google Play's terms and conditions. It is just passed through to Google Play. Google Play keeps all of the revenues. Nothing has happened other than you've mitigated the network externality.

THE COURT: How is that new Play Store entrant going to make money?

DR. BERNHEIM: Ah. So the new Play Store entrant makes money by signing up developers. Once it signs up developers, it starts listing things on its own site that are

things that are -- it's stocking in its store.

And if the user gets on that side and says, "I'm going to download this app," and it's an app where the rival store actually has the relationship with the developer -- okay. So they don't need to piggyback on Google Play for that one -- that's their sale. They get to keep that. They get to keep the revenues from that.

So in the meantime, the only disadvantage they are at as a competitor is -- well, the disadvantage that they would have been at as a competitor from having a smaller catalog, which is the source of the network externality issues, that's removed. And they don't get any benefit from that other than removing, you know, that disadvantage, having a smaller catalog. Other than that --

THE COURT: And then you're -- and the rival who gets access to this catalog could then approach each developer in the Google Play Store catalog and offer its own deal and say, for example, "I'm opening my new storefront. I'm going to have access. All your money and deal terms with Google are going to stay in place unless you sign with me, in which case I'll give you a better fee deal."

DR. BERNHEIM: Exactly. And that's how competition is supposed to work.

THE COURT: This specifically addresses the network effect problem that we heard about at trial.

DR. BERNHEIM: That's what it's designed to do. It mitigates the network --

THE COURT: And is there a cap on duration? Is it six years?

DR. BERNHEIM: Yes. It's a six-year cap.

THE COURT: Doesn't that seem a bit long?

DR. BERNHEIM: Well, the length of this is a judgment call, and it's, honestly, not an exact science. Let me tell you my reasoning for six years. But obviously, ultimately, it's a judgment.

THE COURT: Well, this -- I want to hear from an economist why six years is the number.

DR. BERNHEIM: Exactly.

So I think about it this way: There are sort of two stages to entering. The first is you have to, you know, make your app store. And that's not a simple process. You heard testimony from Google witnesses about that at trial. Google -- they testified that Google had to make large investments in its app store, that its app store has all sorts of things that they invested in creating. Things like app discovery. This is not a quick process.

So you need to give potential entrants some time to develop and launch their app stores. And what I'm thinking, in my mind, that's okay. They need a couple of years to do that, two or three years.

Now, after they do that, now you have competing app stores out there that are potentially viable competitors. They need enough time to establish a base of users and a base of developers that will be robust, and therefore, competitively sustaining; it's viable once this provision expires.

And so, in my mind, the appropriate length of time was an additional three years. The reason three years is that that's is one phone purchase cycle.

So if they're trying to compete through -- through preloading, then one phone -- one phone purchase cycle basically gives the competitor a shot at the entire market once they finish developing and launching their app store.

So that's the thinking behind the period. But I readily acknowledge that this is not an exact science. What we're trying to do is a bit of rough correction for the advantages that Google has but shouldn't have because they're derived from its past conduct.

THE COURT: All right. I'm just going to call on Dr. Gentzkow. I don't know how you're dividing the labor.

DR. GENTZKOW: I'll take this one too.

THE COURT: What's the response to that? Why isn't -- how is that unduly burdensome on competition?

DR. GENTZKOW: Yeah. So let me make several points. The first is to agree with something that you said which is that the network effects that we're talking about here and

those advantages that Google has represent something that existed before any of the conduct that was at issue in the case. And my understanding, what the jury considered at trial, was conduct starting in 2016.

If we roll back the clock to 2016, at that point, the Google Play Store already had a very large catalog of apps. It already had a large number of users. Those network effects were very much in place. In fact, as early as 2011, the Google Play Store had a huge catalog -- much larger than its rivals already at that point in time, when I think even plaintiffs' experts have said Google didn't have any market power, monopoly power, at that point in time.

So Google was a new entrant that competed successfully. That's where these network effects come from. So the suggestion that we should try to create a level playing field in the sense of eliminating those, I think is not at all --

THE COURT: But I think my concern is you're overweighting that the jury has found that illegal monopolization conduct, at a minimum, bolstered and protected, built a moat around, so to speak, whatever natural advantages Google had established at that point.

I need to address that. So I'm definitely not going to say just because there were some first-mover advantages and so on that are totally legitimate, there won't be a consequence. But maybe the way to address that is just have a much shorter,

you know, like a two-year horizon, rather than a six-year horizon.

DR. GENTZKOW: I understand and I'm not saying there shouldn't be any consequence. I'm just saying that should certainly not be to eliminate the network effects or try to remove that advantage entirely because it's one that Google won through competition.

Second point that I think is really important is that -- we were talking about the service fee revenue and how that's going to flow, I think it's crucial that the overwhelming majority of apps on the Play Store don't generate any service fee revenue, or very, very little.

A lot of what provides value to users is those apps -- which many of them are free, many of them provide little revenue -- that there's going to be very little incentive to compete for, and Google is going to be asked to share all of that intellectual property with its rivals.

THE COURT: What intellectual -- Google is hosting a third-party app. What's the intellectual property that's being shared?

DR. GENTZKOW: There's an entire infrastructure that they have built to host those apps, to provide for downloads of those apps.

THE COURT: That's all going to be happening over the a rival -- through the a rival store. It's not going to be

using Google's service, is it?

DR. GENTZKOW: As I understand the proposal, and Dr. Bernheim can correct me if I've got it wrong, what is envisioned here is, if I'm a rival app store and a user -- so first of all, a user can come to the store and now see all 3 million -- or more than 3 million apps that are in Google Play.

If a user wishes to download one of those apps, Google is obligated to provide the service of downloading the app for the user, putting that up on their phone, fulfilling that download. So there's intellectual property associated with that.

THE COURT: Yeah, but you're also saying there's cost associated with that.

DR. GENTZKOW: And there's costs to Google associated with that.

THE COURT: Let's pause a minute.

So, Dr. Bernheim, let's say -- let's make this a little more concrete. Let's say there's an app for growing cucumbers that generates zero revenue because five people a year download it. Google does have some costs, sunk or otherwise, in getting that out to the five cucumber people.

How do you account for that?

DR. BERNHEIM: In the following way:

Professor Gentzkow is forgetting about the other feature of this remedy that creates very strong incentives, which is

that this provision expires -- and we can, you know, return to the issue of how long that period should be, but it expires after a certain amount of time. Now, think about the incentives that creates for the competing app store with respect to all of the smaller apps, all the apps that don't generate revenue.

Professor Gentzkow is essentially arguing that what a competing store might do is focus on, say, the top 250 apps. Go to those developers -- that's where most of the revenues are, you try and create relationships with those developers, but you don't bother with any of the others.

Okay. That means, at the end of six years, or however long you want to make it, your app store has 250 apps and you lose access to everything else. So now you're back in the situation where Google has a catalog with 3 million-plus apps and you, as a competitor, only have this small subset of apps. There's no way you're going to survive at that point.

So in order to be viable when this provision expires, a competing app store must be broadly developing relationships with developers and bringing developers online so that they have a robust catalog when the provision expires.

THE COURT: So, in other words -- just to jump in.

In other words, they would be needing to put their own work into making sure the cucumber app was available independently on their store. Particularly, one way to

mitigate that, in my view -- or ameliorate it, would be a shorter window, two or three years, of allowing the access. That would put a real fire under the a rival to -- if network effects is really the issue, they're going to have to work hard to make sure that those 3 million apps are as freely available, whether they generate money or not, on their own site.

DR. BERNHEIM: I think you're totally right to focus on the length of time as the right policy lever here. And my only hesitation there is whether two or three years are enough, because we've heard a lot about how hard it is to create a really top-notch app store.

THE COURT: No, I understand. And there is a balance -- and I want to be clear that Google, as an illegal monopolist, will have to pay some penalties. So I'm not -- I'm not at all averse to having them bear some costs. But there is a point where that crosses a line to being unreasonable. Remember that the standard here is what is reasonable.

DR. BERNHEIM: Yes. But --

THE COURT: And six years of that strikes me as an awfully long time.

DR. BERNHEIM: Also bear in mind, though, that Google is distributing apps for -- as Professor Gentzkow just said, for the vast majority of its catalog currently without deriving directly any revenue from that.

So I think that what that's telling us is that the cost of

this distribution is not terribly high, particularly compared with the profits that Google has earned by virtue of its monopolization. We had testimony about that at trial.

THE COURT: Well, it certainly goes to the issue of not retaining the fruits of illegal conduct. So if they had to pay back a little bit, that's perfectly within the realm of possibility.

DR. BERNHEIM: That's the argument, yes.

THE COURT: Okay. Dr. Gentzkow, what -- seems like a good response.

DR. GENTZKOW: Yes. I think that -- two points that are crucial.

First, Dr. Bernheim and Epic's essential argument at trial was that app stores can successfully enter the market without having all of those other -- that whole catalog of free apps because they can do it by having exclusives on a small number of top games, top apps; and that is what we actually see happening in the market. There are new entrants already. Microsoft just announced it's going to create an Android app store relatively recently; I think it's opening this summer.

There are other app stores around the world which being are created. In India, the largest games company just said they're introducing --

THE COURT: Can I just jump in?

I will ask you to help me. I don't recall testimony at

trial to the effect that Google's network externalities can be overcome by just having a select few number of high-end developers on your store.

DR. GENTZKOW: We could go back to look at the detailed record, but central -- this was in the context, for example, of the Project Hug agreements, which one of the main reasons that -- I think, in Dr. Bernheim's testimony, as I recall, that he objected to those because it prevented those developers from opening app stores with exclusive content or distinctive content, differentiating themselves from the Play Store. And he made the specific case that that is a viable strategy. But for the challenged conduct, those app stores would have been able to enter and succeed.

THE COURT: Okay.

DR. GENTZKOW: The second thing that I think is really important to point out here is that what we're talking about, this catalog sharing, has the potential to really harm developers and to harm users, have a lot of unintended consequences that are really hard to foresee.

This is a pretty radical reengineering of the market. I think Dr. Bernheim described it in his statement as decoupling the two sides of the market.

So we're changing things dramatically here in ways that could potentially cause more harm than good. And I just want to flag some potential harms from the developers' point of

view.

Think about the developer in this. I'm a developer. I come along. I put my app in the Play Store. That app is now going to appear in any other Android app store, of which there are dozens and dozens, some of them more reputable than others. I have no control over that, as I understand the proposal.

And my app could appear next to objectionable content. There are app stores that host pornography and other content that I might not want my app next to. So my apps are being distributed potentially without my consent, or at least in ways that I might not anticipate.

And the other form of harm is this is going to shut down or at least substantially diminish --

THE COURT: Let's pause on that.

So the concern is the developer may be in company on an app store the developer dislikes and will have not necessarily any prior knowledge of that and may, I assume, have no possibility to fix that. Even if they discover they're next to something objectionable that they don't like, they wouldn't necessarily be able to get off that app store.

DR. GENTZKOW: And I think that's --

THE COURT: That's a harm to developers. Other than hurt feelings, how is that a harm to developers?

DR. GENTZKOW: Because it could undermine their brand. It could undermine the reputation that they have with users if

users see that.

Let me just say that I think the content that it's next to is just one example.

THE COURT: I'm trying to put a -- something concrete on what the harm is. I mean, I understand a developer may -- I mean, to take an extreme example, there might be a religiously charged app and somebody does not want it to be next to something they consider to be morally reprehensible. They certainly would have moral injury, so to speak, from being unhappy that they're in an app store with products that they find incompatible with their viewpoints.

But what is the harm? There's no economic harm, is there?

DR. GENTZKOW: I think the economic harm would come from a user seeing that app in that context and having their evaluation of this religious app that they were thinking of downloading, say. They see it in a context next to some objectionable content, and they think, "This is a developer that puts their app in this app store. That's maybe not the app that I want to download."

And so demand, from an economic point of view, is reduced by seeing it. There's also -- just to flag other versions of this, other reasons why a developer might want to limit the set of app stores or apps they're distributed through. These are all over the world, so there may be legal implications of having my app distributed in other countries that have

different legal regimes. They might be in different currencies and different languages. So that's potentially problematic.

And --

THE COURT: I'm having -- so the premise of Dr. Bernheim's access point is, this is all going to be Google's business as usual. It's just coming from a different portal. Until that developer strikes an individual deal with the -- and I'm sorry.

Until that app store owner strikes an individual deal with a developer, it's all Google. It's 100 percent Google. Nothing is different except you're walking through, you know, a different door to get into Google. So these are all -- Google has already solved all these problems.

You know, like, an app that might be illegal in Iran, for example, is probably not in the Play Store already or -- I mean -- so I'm just not getting it. You're going into the Google Store just through a side door, but it's all Google otherwise, until this developer strikes a deal. And at that point, the developer is going to know exactly what app store they're on because they're negotiating a deal directly with that app store, so there won't be any surprises.

So I'm having trouble understanding how this is actually a concrete issue.

DR. GENTZKOW: If I understand the way it's envisioned, just that that app, although it's being -- the

downloads are being fulfilled by Google and it's being shared out from Google, it's appearing in that other app store And those app stores are going to be distributed in, potentially, places where the Google Play Store is not, and they're going to host content that might appear alongside it.

So I think that's --

THE COURT: Wouldn't Google in fulfilling it already have executed all those restrictions? They would know they can't fulfill an app in a certain country.

DR. GENTZKOW: Well, I think that that -- Google might have apps in the Play Store which it offers in certain countries but not in other countries, potentially.

But I think administering this, there needs to be some procedure here then to determine from Google's point of view, are they going to get consent from developers to share their, the developers', intellectual property out through all of these app stores?

Are developers going to have an opportunity to opt out of doing that?

Is there going to be a system, if a developer does see their app in a context that they don't like, for them to redress that, to ask for it to be removed?

So I think -- I think all of those things are going to make it potentially harmful to developers.

And the other point --

THE COURT: Let's just pause in that for a moment.

Dr. Bernheim, do you have any response to that?

DR. BERNHEIM: Sure. So let me begin with this last point about the supposed harms from catalog sharing.

The thing about distributing all over the world, I just think is a nonissue for exactly the reason you were raising, Your Honor.

Somebody tries to buy the app through another app store and they're going to get a message back from, you know, indirectly from Google that says: "Not available in your area."

And I don't -- I don't see how that -- how that ends up being a problem.

The issue about no control by developers, you may end up with your app next to some unsavory content. I haven't actually seen any evidence that developers are concerned about this. This seems a bit hypothetical to me, so I'm not sure that there's any real problem there; but if you became convinced that there was a problem there, I think that there are alternatives available in terms of tweaking the remedy.

You know, you could incorporate a developer opt-out option. Now, if you did that, there are a couple of things that would be very important. One is that the opt-out should be store specific, rather than broadly opting out of everything because I -- I'm sorry.

The hypothesis here is that there are certain stores out there that may be doing unsavory things, so you don't want the developers' only option to be: To avoid that one store, I have to opt out of these 10 others.

THE COURT: Well, I was actually -- I'll tip my hat.

I was actually thinking more of an opt-in. What about that? Every time a store opens -- I'm just talking off the top of my head on this part, but every time a store opens, Google sends a notice saying: "Would you like to opt in to be available on this other platform?"

DR. BERNHEIM: Right. There's a literature on opt-in and opt-out in behavioral economics, and what it shows is that there tend to be very strong default effects, the default effect being whatever you establish as the default, you get a lot of people just not changing the default.

So if you establish the default to be opt-out so that people have to opt in, you're going to have a much smaller fraction of developers who end up opting in.

If, on the other hand -- and some of that is unintentional; right? It's: They get the message. They ignore the message.

Doing it the other way around puts more of the onus on this fairly uncommon developer who's bothered by this sort of thing. It's like the default here is that you're opted in. If that bothers you, you do have an option to remove.

Let me just add --

THE COURT: Actually, just to jump in, so as an economic principle --

DR. BERNHEIM: Yeah.

THE COURT: -- opting in is going to be much less effective in dealing with network effects than opting out.

DR. BERNHEIM: That's correct.

THE COURT: Okay. All right.

DR. BERNHEIM: Okay. What I would add in terms of what else would be needed if you go for the opt-out option is the provisions that we talked about a little while ago, about Google not being allowed to write contracts that are conditional on activities as a rival or interactions with a rival. They would have to apply to opt out, too. You don't want Google incentivizing opt-out, or that's going to defeat the whole purpose.

And we probably would also want that provision that I described earlier that says -- you know, in the contract with the developer, it says: Nothing in here -- none of the terms in here are conditional on your opt-out decisions.

THE COURT: This is probably beyond your expertise, but how would the opt-out work?

DR. BERNHEIM: So this is getting into a technical question. I can tell you how I envision it, and then other parties who know more about the technical details are going to

have to say what's feasible and what isn't feasible.

But you could imagine that a developer, when first listing a -- a -- an app on Google Play simply gets a screen on which there are listed a bunch of stores, and you know, they can check the ones that they don't want to be listed on.

THE COURT: Well, we've gotten 3 million installed. Let's say next week somebody opens -- or week after the injunction is out, if I did this --

DR. BERNHEIM: Yeah.

THE COURT: -- 10 stores open up.

DR. BERNHEIM: Right.

THE COURT: Now, is that developer going to get 10 opt-out requests for each of those stores?

DR. BERNHEIM: For a new store, we would have to have some process of reaching out to the developers. It seems like that could be a fairly easily automated process.

THE COURT: Through Google?

DR. BERNHEIM: Through Google. I'm not sure it would need to happen, you know, literally the moment that a store pops up. It might be enough to do it once a month, for example. Developers get a message that says: During this past month we have the following new stores. Please indicate whether you want to opt out of any of those.

THE COURT: This is a little bit more detail than we need, but this would be a one-time only opt-out? What if

six months later you decide the store is going in a direction you don't like.

DR. BERNHEIM: No. They should be able to get back into the system and opt out.

THE COURT: Okay. So it's -- it's one ask, and then you can ask yourself if --

DR. BERNHEIM: I think you probably should be able to, yes.

THE COURT: All right. Dr. Gentzkow?

DR. GENTZKOW: Yeah. So I think the first thing I would say just on the characterization of economics is I think that same behavioral economics literature that Dr. Bernheim is referencing shows that if the default is opt-in, there are going to be a very large number of developers that are opted in without realizing that, without paying attention to it, without noticing this notification that might come through their e-mail.

So I think the problem, from my point of view, with making the default be for every developer on Play to be shared in every Android app store is that those of them that would suffer some harm from that, there are going to be a lot of them that don't recognize that. I think the opt-in version of that --

THE COURT: But they could -- if it turns out later that someone says, "Hey, this is a bad deal," they can tell Google or tell the store, tell the rival store, "We don't want

to be here anymore."

DR. GENTZKOW: They could -- they could opt out later.

THE COURT: What's wrong with that? Look, I have to do something to overcome the network effects. This seems reasonably tailored to that. Leaves it up to the developer.

So if you're worried about harm, who better to decide the harm than the -- or the risk of harm than the developer itself?

DR. GENTZKOW: Yeah. And I think that is satisfied by the opt-in version of it that gives developers who would like to participate in this the option to do that. I also think that, even under that provision, there's harm to the developers because there's going to be less competition in this market.

We're going to be reducing the amount of competition. Right now, all of these app stores have incentives to compete for service fee revenue from apps but also for the apps that are going to be part of their catalog they can show to users.

THE COURT: Well, but that's why they'll have a two-year horizon. So for two years -- two years you get to -- to build your base on a Google Play Store that is, at least in part, the fruit of illegal conduct. After two years, if you haven't locked in those developers, they're gone.

DR. GENTZKOW: And so just --

THE COURT: So you will lose as the rival store. You will lose if you haven't locked in your own independent deals.

So doesn't that address that issue for competition?

DR. GENTZKOW: I don't think it fully addresses that issue because for that -- for the duration of that period of time, there are going to be less incentives to --

THE COURT: Well, of course. There's a remedial period in the wake of the verdict of monopolization. That just comes with the territory.

Okay. There's going to be a two-year period when we have to make things right. It's like my recovering from the shoulder surgery. I've got six months where I have to do things that I don't want to do and can't do things that I do want to do; but at the end of it, I'm going to be great. Okay?

So this is the two-year -- this is the equivalent.

DR. GENTZKOW: Yeah.

THE COURT: So for two years, maybe there'll be technically reduced competition. But I just don't see that because those developers -- or those app stores are under a gun literally; that if, at the end of that two-year period, they haven't locked in their deals, Epic is gone, all the top people are gone. And that's got to be a huge spur to competition.

DR. GENTZKOW: Yeah. So I think it's -- I think I just -- I just need to highlight the harm that could happen during that period of -- during the term of that provision.

THE COURT: Dr. Bernheim?

DR. BERNHEIM: A couple of things. First, I just wanted to address the length for one second because you have

mentioned two years.

THE COURT: Because -- I know I keep saying two. It's not a scientific number, but --

DR. BERNHEIM: So on that, one other possibility to consider is to say that there is some period of time which could be a longer period of time, like six years, wherein if an app store launches, it gets two years of catalog sharing after that. Up to the total limit of six years.

What I'm concerned about is if you just say two years, starting from 2024, you're going to get stores launching late in that two-year period, and they're just not going to get much of a benefit. Whereas, if it is once you launch you get the two years, as long as that total amount of time doesn't exceed six years, that would be a better way to ensure that rivals, once they launch, are going to benefit from this provision.

That said --

THE COURT: That would seem, though, to actually maybe be a bit of a restraint on competition. So, basically, you have six years of restrained competition as opposed to two years.

I understand what you're saying about if somebody decides in month 14 or month 18 to launch, they may have only six months of access, but that's their choice. I mean --

DR. BERNHEIM: Well, it's just not feasible for some of them. So Amazon may be ready to launch right away. So

Amazon launches right away, 2024. 2026, they lose catalog access. It doesn't go beyond the two years. So what you're doing for Amazon lasts two years in providing the access and no more. You could do it that way.

But if somebody, you know, a new entrant goes "Hey, the rules of the game have totally changed. We're not ready to launch an app store but this is a great market," you don't want them taking close to two years. It's going to take time --

THE COURT: I understand. But I also don't think someone should have the ability to wait for four years and then say, "Now I want in." That just seems a little much.

DR. BERNHEIM: This is a matter of adjusting the lengths of time so that they seem reasonable. So is it four years? Is it three? Is it two and two?

I'm just suggesting that there's an additional --

THE COURT: Nuance. I see.

DR. BERNHEIM: -- avenue for you to work with -- this is a judgment call. This part of it is really not an exact science. So it's a judgment call, but you have two pieces to work with here rather than one.

THE COURT: Okay.

DR. BERNHEIM: The other thing that I wanted to address is this opt-in/opt-out thing where Professor Gentzkow has made an argument that it should be opt-in rather than opt-out.

And I think the thing to keep in mind is that the vast majority of developers are very unlikely to want to opt out, given their awareness of it.

Remember how this works. If they want, they don't have to sign up with any other app store. Their relationship could still be entirely with Google, Google's terms and conditions, everything with Google; right? And the only additional thing that happens is they may get some additional sales that happen to originate in other stores.

That's the only change.

So I think the majority -- the vast majority of developers are going to go "This is a great deal. We're getting free exposure in additional locales. Why is that bad?"

So there may be an occasional developer who says: We really care about this issue of being sullied by something else on this particular store.

Any developer that feels that way is going to have the motivation and the opportunity to opt out. The ones who care about this can opt out.

I don't think that the fact that there may be a small number of those should mean that we use this inertia effect to contrive an outcome that is going to work in Google's favor.

THE COURT: Okay. Dr. Gentzkow, you're going to describe potential harms to users, and then we'll take a short break after that. Okay?

DR. GENTZKOW: Yeah. I think there are potential harms to users, first of all, from diminished competition because --

THE COURT: All right. For a two-year period or four-year period, that is just going to happen, but --

DR. GENTZKOW: For that duration, there would also be harm to users.

THE COURT: Why is that a harm to a user, if the stores multiply? That makes it a lot easier to find the app you want.

DR. GENTZKOW: Just in a sense that in a two-sided market in economics, one of the reasons why you're competing to attract users is because you want to attract developers -- this is the chicken-and-egg kind of issue that Dr. Bernheim referred to -- and if I no longer need to attract developers, I'm going to compete less for users.

There's another part of this proposal which we haven't talked about which Epic has referred to in the proposed injunction as "library porting." I don't know if that is still part of the proposal; but if it is, that also, I think, involves substantial harm to users that we'd want to discuss.

THE COURT: Okay. Dr. Bernheim?

DR. BERNHEIM: Your Honor, honestly, I don't understand the diminished competition point.

THE COURT: I'm struggling myself, but I'm not an

economist. So help me. Help me.

DR. BERNHEIM: Right now we don't have meaningful competition. This remedy is creating a pathway to competition. And on that pathway, all the parties have strong incentives to compete. The rival app stores have incentives to sign up developers so that they can get revenue streams and so that they're not dead in the water when this provision expires.

Google has incentives to continue to sign up developers so that they're not at a disadvantage.

THE COURT: And maybe change their fee structure too.

DR. BERNHEIM: Right.

So all of a sudden, you have competition bursting out. I just don't understand the point about reduced competition.

Library porting is a longer issue, and Professor Gentzkow hasn't explained the objections yet, so --

THE COURT: Let's do this. Let's take a 10-minute -- we'll come back at 12:40, and we'll pick it up at the library porting. Thank you.

THE CLERK: All rise. Court is in recess.

(Recess taken at 12:26 p.m.)

(Proceedings resumed at 12:45 p.m.)

THE CLERK: Remain seated and come to order.

We're back on the record in Civil 25-671, Epic Games, Inc. v. Google, LLC, and Multi-District Litigation 21-2981, In Re: Google Play Store Antitrust Litigation.

THE COURT: Okay. We stopped with the library issue.

Dr. Bernheim?

DR. BERNHEIM: I'm happy to dive into library porting.

THE COURT: Yes, please.

DR. BERNHEIM: I think Professor Gentzkow hadn't explained the objections to it yet.

THE COURT: Okay. Let's set the table then.

Dr. Gentzkow?

DR. GENTZKOW: So the library porting remedy, I think it's important to describe again what it amounts to, to describe what it amounts to, which is that any app store on my phone can present me with a screen. And if I click on it, that app store takes over all of the other apps on my phone that were downloaded from Google Play that are in that app store. It now controls their updates and it now gets all of their service fee revenue.

So let me highlight three problems with that.

The first, I think, just to keep in focus, along with the catalog access remedy, this is part of a really radical restructuring of the market, what Dr. Bernheim has described, turning a two-sided market into a one-sided market is a pretty dramatic restructuring.

Second, I think, something we haven't touched on that is really important to keep in focus is that the technology for none of these things exists right now. Dr. Bernheim alluded to

Alleyoop -- we can talk more about that, but it's incorrect in my understanding that there is any technology existing that would not require development of a substantial new product to do this.

And third, as I alluded to before the break, I think this has the potential to really harm users. Think about like what it's setting up is a situation where any app store that gets a user to click on one button can take over the service fee revenue from all of their apps. That's an enormous economic incentive for app stores to get users to click on a button and, I think, looking out at the economy broadly, situations where firms have huge incentives to get users to click on something tend not to work out very well.

There's a huge possibility, coming back to behavioral economics, as Dr. Bernheim was talking about. We know consumers are not super attentive to those things, and that is going to give the app stores a huge incentive to bombard them with messages trying to get them to do that, to put up a deceptive message that tries to get them to click on it, maybe inadvertently.

THE COURT: I'm having trouble understanding that.

What I -- what you seem to be saying is consumers benefit from a monopoly. I don't agree with that. Just because there's one source, so you won't be bombarded with competing messages or ads you don't want, that's not -- I don't see that

as consumer harm.

I mean, yes, okay, maybe -- maybe because Google has a chokehold on the market, which is illegally acquired through monopolistic conduct, life is less cluttered for users. But to me, it seems perfectly fine to say competition will have a lot more outreach from competing stores.

Why is that a harm?

DR. GENTZKOW: I think it's a really important question because I think there's a huge distinction between economic competition and what this would entail.

Remember that all of these apps on my phone were discovered and downloaded through another app store that provided all the services to do that.

What these other app stores are competing for is not to deliver more value to consumers. There's not a proposition here of "You will click on this if -- because our app store is better, because we're offering lower prices. There's -- all we need to do is get you to click on one button."

And so while there is some competitive incentive there, I think there's going to be a tremendous likelihood that the competition is not on the margin of giving value, but of tricking consumers, using dark patterns, using deceptive marketing to get them to click on something.

THE COURT: This all seems completely speculative to me.

Where is all this coming from?

It seems to me that you're just presuming, without any evidence in the record, that this is going to devolve into a sort of dystopian nightmare of competing app stores.

Why isn't it equally probable, if you're just speculating, that the opposite will happen, this would be a golden age of consumer choice?

DR. GENTZKOW: I think it's important to say there is, as you said, in the record, no evidence either way on what would happen with this because it's completely outside of anything that was considered at trial. So there's a risk -- at a minimum, I would say there is a risk that it could create substantial harms of the kind we're talking about.

THE COURT: I just don't see why you say that. That's what I'm saying. I don't -- yes. Okay. I mean, that is just like saying, there's an equally reasonable probability that it will be the best thing that's ever happened. So it's a value-neutral choice.

DR. GENTZKOW: Yeah, I think it's -- I think that it is creating something completely new that has never existed before that has the potential to create real harm for users.

Think about what happens. I downloaded the Aptoide App Store. I click on this button. I'm a user who creates a lot of revenue. I play a lot of games. I have a lot of apps on my phone. The Aptoide App Store takes over all of those apps and

now -- first of all, as part of this, as I understand it, that app store has access to a list of all of the apps on my phone. There are privacy risks associated with that. I could have a cancer-related app. I could have an app that reveals my --

THE COURT: Well, but Google is already doing that.

DR. GENTZKOW: Google is already doing?

THE COURT: Google already knows what all the other apps are on your phone. So what difference does it make if another store does?

DR. GENTZKOW: Because consumers consent to and understand that as part of relationship with Google. They're not anticipating that all of those apps are --

THE COURT: Consent? Have you read user -- terms of use that most of these tech companies have?

DR. GENTZKOW: The --

THE COURT: The consent to give away everything in your portfolio, every private information. I see these constantly. Every judge in this district does.

DR. GENTZKOW: I understand.

THE COURT: Okay?

I mean, if you want to talk about consent, every time you sign up for one of these tech services, you have given away basically everything you consider to be private. So I don't understand -- so what difference does it make if another app store has equal footing to that same information? How is that

harmful to consumers?

DR. GENTZKOW: The expectation, I think, that a consumer has of their relationship with Google, if you have an Android phone -- I think if we surveyed -- I do not have quantitative evidence on this --

THE COURT: I find this to be unproductively speculative.

What is the economic point you're trying to -- I think, you know, you're not in a situation to guess what consumers may or may not think.

What is the economic -- what is the economic harm to the users? None of this so far is an economic harm, which is your area. What is the economic harm to users?

DR. GENTZKOW: I think the economic harm comes from the consumer's potential to have, as part of this transaction, their privacy compromised, their security compromised, potentially, through --

THE COURT: But you don't know any of that. You have no data for that. And you have no data to show that that would be any different from what Google is currently doing.

DR. GENTZKOW: Right. I recognize that --

THE COURT: Right? You don't. So --

DR. GENTZKOW: But I would also just note that, part of the reason why there's no data for that in the record is because this whole proposal of restructuring the market in this

way is one that we haven't had evidence about at all. And so, at the minimum, it has the potential to do a lot more harm than good. Those risks are --

THE COURT: I just don't see that. I mean, you keep saying that, but that's just your saying it. I mean, you have no evidence for that. And it's not a matter of not having a record.

You should know, or you might have known what Google does. You haven't said this would be anything different from what Google does. That's the only touchpoint that really matters.

Is this anything different from what Google already does? And I don't think you're in a position to say one way or the other.

Are you? Maybe you are.

DR. GENTZKOW: I think it is completely different than what Google does because there is a no analogous provision or no analogous technology in the Google Play Store to take over apps that were downloaded through other app stores on the --

THE COURT: That doesn't speak to the privacy and security concerns that you believe may be a problem.

I just don't see it.

DR. GENTZKOW: Dr. Bernheim referenced behavioral economics before. That, I think, is in my area of expertise.

Behavioral economics, as we were just talking about, says that consumers are at risk and can frequently make decisions,

like clicking on a button, without fully understanding the consequences of it.

And the consequences -- we're setting something up where the consequences of a user clicking on a button that they don't fully understand can be quite serious here. And we're also creating a huge economic incentive for app stores to get users to do something that might not be in those users' interest.

It's not competition in the form of trying to give those users more value. It's setting up a specific economic incentive to potentially deceive consumers, to get them to do something which may not be in their own interest; there are many examples of that elsewhere in the economy. And that is -- tends to be something which does not produce the kind of value that we associate with the company.

THE COURT: I find that to be entirely speculative.

Look, this is -- you know, this has been Google's strategy in the objections -- the 90 pages of objections -- that there's a terrifying world of chaos and anarchy that's just around the corner if there's competition in the app store market.

I don't buy it. I just don't buy it. That's just somebody who doesn't want to change their illegal ways.

DR. GENTZKOW: I think it's not --

THE COURT: There is going to be a remedy. Okay?

And if it causes a period of two years or four years or six years of adjustment, that's -- that's the consequence of

having violated the antitrust laws. There is going to be -- there's going to be -- we're going to be walking on new terrain for a while. Okay?

So that's just -- that's just -- this is the consequence of breaking the antitrust laws. We have to do things in a different way. And you must do things in a different way. That is sort of necessarily true after the verdict.

So to, you know, jump up and down as Google has been doing and say, "Well, the different way is inevitably going to be a world nobody wants to live in" is just unfounded. I'm sorry. It's just not -- I mean, it's just equally probable it's going to be, as I said three times already, heaven on earth.

So, I mean, competition in our system is presumed to create heaven on earth, much more so than monopolistic conduct, illegal monopolist conduct.

But anyway, Dr. Bernheim, is there anything you want to add to some of those points or respond to?

DR. BERNHEIM: Sure. First of all, I'd like to correct a misstatement about the remedy.

It is not true that the remedy allows another app store to take over the revenue for all of the apps that a customer has through Google Play. It must be that that rival has established relationships, direct relationships with the developers.

So it's only a subset of the apps. It's only the ones for

which they have the agreement with the developers.

I just want to make sure that that --

THE COURT: I'm with you. I understand that.

DR. BERNHEIM: Okay. Now --

THE COURT: Can I just add, what about library porting, specifically?

DR. BERNHEIM: Sorry?

THE COURT: Library porting, specifically.

DR. BERNHEIM: Yes. Library porting, specifically.

Addressing some of the concerns that Professor Gentzkow raised with respect to maybe consumers can be induced to make a bad choice, I honestly don't see the distinction that he's making about this not being the case with other competition. I mean, this is a risk of competition in all contexts that, you know, some competitors will try and trick people. It's going to be true here, too. But we think that competition generally is beneficial.

The protection that we have here is that, first of all, the consumer must consent explicitly. You can't share anything, you can't shift their apps, unless they consent.

And second, in contrast to what we talked about a little while ago, this is opt-in rather than opt-out. Okay? The consumer has to say, yes, affirmatively, you have my permission to do this.

So all the factors that Professor Gentzkow and I were

agreeing about earlier about the importance of default effects will work to make it so that what he's -- you know, what he's fearing is not going to be as significant.

THE COURT: Can I just make sure we're on -- I'm -- I was thinking -- so unlike developers who may have existing relationships with the Play Store and they need to opt out affirmatively, if that's the way I decide to go, in the marketplace, the consumer makes his or her own personal choice about how to acquire an app.

So if they love the default option of Google Play Store, then they can stick with that for the rest of their purchasing life. If, for whatever reason, they want to shop around, it's their intentional, knowing, and informed choice to buy an app from another store. And if it turns out that the store serves a bad product or lies or cheats or steals, they just won't go back to that store.

I mean, it seems to me that is actually the ultimate safeguard. And, you know, I see the other end, the deceptive conduct, a lot in this courtroom, and it has market consequences. If you get a reputation for being a shady spot, where you download this and your address book is going to get hacked, no one is going to do business with you again. And you know as well as I do that word gets out like wildfire on the internet, sometimes incorrectly, but -- okay.

All right. So we agree that the opt-in is really a good

protection for the consumer.

DR. BERNHEIM: I think it's adequate protection. We understand that no system is going to be perfect.

If -- there are a few other things I would say about library porting, if I may.

THE COURT: Yes.

DR. BERNHEIM: You can think about library porting as consisting of a few different elements.

The first element, consider the following scenario: Let's say we've got my app store and somebody has purchased an app through my app store but it was -- I was piggybacking on Google Play, so it's actually Google Play's app -- okay? -- because I didn't have a relationship with the developer.

Now I create a relationship with the developer. For that app -- and I know that that customer has that app because I'm the one that facilitated the download. Okay?

For that app, the developer should be in a position of going to the user and saying, "Hey, you downloaded it on my site. I will now give you some points if you'll move the ownership over to my store so that, you know, you're coming out ahead."

After all, that -- that store made the investment in helping the consumer discover that app. So that's the first piece. Okay.

Now you go a little bit beyond that and you say, "Well,

what about the other apps?" You've got -- my app store now has other apps that this customer bought through Google Play, didn't download them through my store, but I do have relationships with the developers.

Should I be able to solicit the user to shift other apps over to my store?

And, I think, the answer is, of course. You can do that now; right? You just go to the user and say, "Just remove the current app from your phone and then re-download it from my website."

That is -- that is switching ownership of the app from one app store to another. They can do that now. All we're doing is making that process a bit less friction -- less friction in that process.

THE COURT: Okay.

DR. BERNHEIM: Okay? And then library porting has a third element, which is the user can go to Google Play and say, "Hey, I want you to give the list of the apps that I have on my phone to this other app store so that they can switch the ones that they now, you know, have direct relationships with developers."

This is the one I think that Professor Gentzkow's concern is raising the privacy issues because, otherwise, another app store has no way of getting that information. They're only getting information that, you know, they already know because

they were responsible for downloading the app or, you know, the user is affirmatively trying to switch the ownership of some other app.

I don't think that the -- that the privacy part of this is a big deal. But if, you know, you were concerned about the privacy part, you know, that piece of it is a separate -- like I said, library porting has these three pieces, and you can kind of think of them as being somewhat separable.

THE COURT: Well, here's how I think about it: If you're going to download an app store, you're going to have terms of service, and you're going to have informed, quote/unquote -- because nobody ever reads them -- but informed consent by the user as to what that app store is going to do when it's platformed on your personal device.

I think that -- I mean, that is enough to put privacy in the hands of user in a way that they can decide. So if they read -- there's a new app store and they read it and it says, "Oh, no. This app store says it's going to canvass every app I have on my phone and send back a message to the home office. I don't like that," then maybe one point of competition will be, you know, the private app store.

That's our -- that's our selling point. We will never ask you to reveal anything about yourself, and that's why you should shop with us. And that's how we're going to differentiate ourselves from everybody else. We don't poke

around your phone.

So I'm not -- I'm not troubled about the -- it -- the privacy will be in the control of the consumer, as far as I can tell. I've heard nothing, and it's certainly consistent with every other technology app and device I've seen in 10 years on the bench.

So, no. You may -- you may raise other points which is, is there truly consumer choice? That's not our issue. So, you know, that's for a different case, but -- okay.

All right. I would like to -- we still have Google billing to talk about. We've heard a lot now, Dr. Bernheim, on remedies for past conduct and opening up the market for opportunities to compete fairly, are there any other big-ticket items you want to raise?

DR. BERNHEIM: There were a couple of other items that were focused on opening up the market. One of them was for a period of time requiring Google Play to distribute competing app stores. The purpose of this is, again, you don't want to have these remedies -- this portion of the remedy in place for very long.

If you are a competing app store, you have two ways of distributing your app. One is through preloading. And, you know, we need to give them enough time to go through a preload cycle, but you can also have, you know, downloads independent of preloading.

And the thing about downloads is everybody -- all the Google Android users are kind of trained at this point to go to Google Play, and it's going to take a while to undo that.

So if you make these apps available on -- the competing app stores available on Google Play for a limited period of time, you are offsetting the advantage that Google Play has acquired by virtue of its past anticompetitive conduct as the dominant go-to provider of app store distributions. So that would be a temporary provision to provide some offset for that advantage.

THE COURT: So how would that work in practice? Let's say there's -- I'm not agreeing -- there's a six-year remedial period. An app store opens up in year four, would a year be sufficient, from an economist point of view, to be -- to require Google to make that app store available?

DR. BERNHEIM: Again, it's --

THE COURT: Six months? I mean, how much time --

DR. BERNHEIM: It's a judgment call, and it's hard to be precise about that.

THE COURT: But from an economist point of view, dealing with network effects, what would the estimate be? I know it's an estimate, but --

DR. BERNHEIM: You know, this is more of a gut reaction than an estimate.

I think, to acquire a robust user base, you're probably

talking about a couple of years; but this is a gut reaction. I can't point to hard evidence on the time frame. Unfortunately, this is the part of this -- as I've been saying, the length of time is the part of this that is not an exact science.

THE COURT: But it would be the case that, regardless of the period of time, one year, two years, six months, market forces would decide whether that store lives or dies. So if they're on Google Play for a year or two years, they don't get any traction, that's -- then they're done.

DR. BERNHEIM: They're done. That's absolutely right.

THE COURT: Okay. All right. Okay.

And was there anything else on the app store side?

DR. BERNHEIM: I'm not thinking of anything, as I sit here.

THE COURT: Okay. Dr. Gentzkow, on the posting of competing stores for a certain period of time on Google's website.

DR. GENTZKOW: Yeah. So there are a couple of points, that distributing your competitor's products is a form of enforced free riding, which has significant consequences. There's not a technical infrastructure to do this right now, as I understand it; it might require some modifications.

But I think the most important point here is potential harm to users coming from the fact that, when a user comes to Google Play, they expect a certain level of security

protections. Google has invested a huge amount over time to do security screening in the Play Store to make sure that the apps are safe.

And so a question that I think would need to be answered with anything like this is: How do we make sure that any app stores which are offered on the Play Store meet the same kind of security standards, privacy standards, and other standards that people expect when they come to Google Play. That's a much, much harder problem trying to look at an app store and figure out: Is it going to be safe?

The Aptoide App Store, the APKPure App Store, one of these app stores that comes to the door and says, "We'd like to be distributed on Google Play," we have to figure out of it's --

THE COURT: Let me jump in for a moment. You should jump in, too, if I'm wrong, if I'm recollecting incorrectly, but I'm glad you mentioned this.

I want to talk about sideloading and friction and security issues too. So at trial, the testimony about sideloading is Google cannot determine whether a third-party app has been vetted for security purposes if it's just being downloaded on the side.

And the answer to -- Google's answer to that was, at least in part, to have 12 to 18 screens, I think it was, telling the user over and over again, "This is all on you. Proceed at your own risk. Click 'yes' 12 times to manifest your desire to

proceed at your own risk." So, in other words, they just push it onto the consumer.

Why isn't that effectively the answer -- that's too many screens. We'll talk about that in a minute. But why isn't that effectively the answer here?

Why is it Google's problem? Google just tells the consumer, "Hey, you're not in our ecosphere anymore so -- you're not in our ecosystem anymore, so good luck. It's all on you."

What's wrong with that?

DR. GENTZKOW: I think because there is this expectation that consumers have and a brand that Google has established saying, "Things we distribute through the Play Store are safe and secure," from the --

THE COURT: I understand. But you're telling consumers, "Now you're walking out of the garden. Proceed on your own risk." So you're directly addressing that.

You're not subject to, "Whatever we do, you're now on your own. Are you sure you want to do this?"

And they say yes or no.

Why isn't that the answer?

DR. GENTZKOW: I think that would be a step in the right direction, but it would not address the concern fully because distributing any app store that comes along, even -- even the, you know, side -- apps downloaded through

sideloading and other channels, there are some security protections in place and so I think the security risk involved in an app store that is downloaded are substantially higher.

THE COURT: Well, let me be clear: If Google is going to have the requirement of making other app stores available within Google Play, it's -- I would imagine it's going to be certainly fine for Google Play to make sure that app is okay, the app itself is not a problem.

So Google is not being to forced to put up malware under the guise of an app store. That is not going to happen. So Google will vet the app store, say, "This looks great, according to all our normal vetting processes. And, Consumer, if you want to walk through that door, you know, go -- go on on your own. That's your choice."

DR. GENTZKOW: Yeah --

THE COURT: How is that a harm to anybody?

DR. GENTZKOW: I think it's just, again, app stores pose particular risks because Google cannot inspect, at that time, what are the -- all of the apps on the store and what will be the apps on the store in the future.

There's also, just to flag a potential harm here to OEMs, because -- and to carriers who currently compete for pre-installation. So right now, OEMs benefit from the fact that app stores that are looking for distribution have to compete for their business to try to get preloaded on the

phones. If, for a period of time, all of those app stores can automatically be distributed through Google Play, they are not going to be competing at all or at least certainly as hard --

THE COURT: Yes, for 24 months that will be true and that's -- that is the consequence of having an illegal monopoly.

I know we've gone to this -- gone around this pole a couple of times but, yes, there are going to be some time for the remedial period when competition may not be perfect from an economist's point of view. That is the nature of remedial work.

You've got to repair the damage, and sometimes that means you're going to have a slightly less-than-ideal situation until equilibrium or market forces are restored. So I'm not -- I'm not at all concerned about the fact that for a two-year, whatever, six-year period, things may not be ideal from a competitive point of view because we're making them ideal through that time period. It's just the cost of going forward.

DR. GENTZKOW: I would note, respectively, that six years is very, very different from two years --

THE COURT: Well, I've already said I'm a little worried about six years. I understand that.

DR. GENTZKOW: And I think my role is just to try to highlight the magnitude of these potential harms. I understand it's your job to decide.

THE COURT: Let me ask you this -- well, actually, let's close out.

Any response to that, Dr. Bernheim?

DR. BERNHEIM: Sure. Professor Gentzkow mentioned several arguments. One is that the app stores would be free riding on the Google Play Store because they would be distributed on Google Play for free. Google has emphasized over and over again that the vast majority of the 3 million-plus apps on the app store basically free ride because they don't generate any revenue directly for Google Play.

So if you've got, you know, 3 million-plus apps that are already free riding and you add a few more stores to that, I just can't imagine that that's a meaningful problem.

Technical infrastructure, all we're talking about is putting an app in an app store so that it could be downloaded through the app store. We're not experts in the technical part of this, but I'm having trouble understanding why it can't simply be downloaded as an app.

Most of what Professor Gentzkow said focused on security issues. And what I'm troubled by in the arguments that he was making is that it sounds like these are objections to competition. He's saying that there are stores out there that may not be maintaining security standards, and that that is going to be problematic.

Well, yes, if you open up competition, I mean, there are security -- things you can do to ensure adequate security. And I know we're going to get to that. But, you know, the security risk that's posed isn't specific to it having been downloaded through the Google Play Store.

This is a statement about competitors, and the underlying theme there is that competitors are bad and you shouldn't allow them because they pose security risk.

THE COURT: Yes. I mean, to my ear, it sounds very close to saying, "We need to be a monopoly to protect you."

DR. BERNHEIM: That is right.

THE COURT: And I just don't buy that.

DR. GENTZKOW: Could I respond, Your Honor?

THE COURT: Yes.

DR. GENTZKOW: Just to that point, because I think it's not just competition. I think part of competition is a firm's ability to build their product and their brand and reputation with consumers.

If I have a store, Target, that I have developed, that stands for, in consumers' mind, a whole bunch of things that I've worked to build, that's how I compete. Then, being forced to put a bunch of stuff in my Target store that is potentially dangerous -- toys for kids with lead paint -- that are not really consistent with my brand, is undermining competition because it makes it harder for consumers to identify with those

brands, and it makes it harder for firms to compete in the marketplace. So I don't think this is just competition.

Requiring a competitor to distribute the products of their rivals is a very unusual thing in markets, and it has significant downsides from the perspective of competition.

THE COURT: It may be, but this is a tech market and this is a monopolization of a tech market, and I think there is room for innovation, and remedy calls for some creativity and flexibility, given the circumstances. So I'm not at all put off by the fact that this may not happen in the distribution of petroleum products or agricultural products. Different market, different time, different conditions.

I wanted to ask -- I don't want to cut anything off you had to add, but there are some -- there were concerns about SIM shipping, feature parity. That would probably all shake out in the provision that would say "You can't have any agreements that would affect" -- okay.

DR. BERNHEIM: Conditionality, yes.

THE COURT: The last thing I have to say --

DR. GENTZKOW: Can I make one point on that, Your Honor?

THE COURT: Sure.

DR. GENTZKOW: I just want to be clear. Since -- when we talked about before, I believe what we were talking about was, on all of those provisions, something that's restricted to

explicit clauses referencing rivals related to exclusivity --

THE COURT: You make the lawyer in me nervous when you start putting in modifiers like "explicit."

I'm not -- you either say it or you don't. I'm not going to say it has to be a specific word or anything else. But if the intent is to do it, that's enough. You can't do that.

DR. GENTZKOW: I just want to make sure that we're clear. There's some language in the proposed injunction about conduct which even disincentivizes, changes the incentives of firms to do those things.

THE COURT: Oh, okay. I think I might be able to jump -- I'm not using language like that. I'm writing the injunction.

DR. GENTZKOW: I just want to make very clear --

THE COURT: I understand what you're saying and I -- there are -- I said earlier, I believe at the start, I found some of it to be too open-ended and too vague.

Remember, that injunction has to be enforceable in a contempt proceeding, and you can only do that if someone is on clear notice you can't do something. So that is effectively what I'm going to have to do.

This may be -- this is the last point I want to raise. If you have anything else, I'm happy to hear from both of you on the app store, but, you know, the security thing. Here is what I'm thinking, and I'm going to just talk out loud here, among

friends, for a moment.

There is a complicated world of security that, as a district judge, I should not be involved in. Okay?

All I want to be involved in is the friction. So there was testimony from, I think, Professor Mickens -- if I'm getting his name right -- about you don't need 12 to 18 screens. You can accomplish this in -- I can't remember how many he said -- but a fraction of that. Okay?

I want to focus just on that portion. That is all, I think, an injunction could do, is -- I can reduce the friction. It's clear. It's understandable. It's doable based on the evidence done at trial, and I don't need to wade into all of the tremendously complicated, possibly, security issues that lurk behind that.

So it seems to me this is part of the app market because there was evidence at trial that the friction Google put into those multiple screens was intentionally done to discourage sideloading, direct loading, and getting apps from a source other than Google's own Play Store.

So are you comfortable with the idea that just reducing -- and I also think it ties into one of my main themes, which I hope is becoming clear, trust the consumer to make his or her own choice. So if you want to shop outside of Google, and you feel like you're giving up a security blanket, that's fine; just do it knowingly and intelligently. Okay.

So I'm perfectly fine having a couple of screens saying you're -- you know, whatever Google is going to say about security and safety.

Does that seem okay?

I mean, there must be some degree of accommodation between reasonable security and not having it so burdensome. I believe -- I can't remember who it was. It might have been Ms. Kochikar who said, the number of security screens was abysmal. I think that was her word, "abysmal." Her own word. Google's own word. "This is abysmal. We're doing it. This is abysmal."

So how do we get to reasonable from abysmal?

DR. BERNHEIM: You know, this is venturing into an area where economic expertise is speaking less clearly to the issue because this is about security. You know, I'm not a security expert, and I suspect the other economists are kind of in the same boat.

You know, reducing the number of screens, making simple warnings, simple one-time decision, I think the remedy has some language that goes in that direction.

That seems reasonable to me. The economic principle that we introduced concerning security, if I could add to that, is basically a parity provision; that if you want to avoid micromanaging everything Google does with respect to security, then one possibility is to say: Look, we're not concerned with

the level of what you're doing on security. We're concerned about it being uneven. We're concerned about you doing one thing for Google Play and another thing for your rivals.

And if you have some sort of a parity provision that says the same security standards have to apply to both, then you can't have that manipulation, which is what we've seen --

THE COURT: Let me just jump in.

The way I've been thinking about this is -- I think it's the same concept, but maybe slightly different -- nondiscriminatory; in other words, that is the phrase I'm using, but I can't just say that. That's like -- there has to be something in it.

So from an economist's point of view, how would you phrase -- it's like a rule, but it can't be so vague that it's subject to a misunderstanding.

Is there some way an economist would put that?

DR. BERNHEIM: I'm not sure I have an easy solution to that.

THE COURT: That might require another proceeding. Okay.

Okay. Doctor?

DR. GENTZKOW: So I would say, first of all, I agree -- I think I agree that reducing that 15 screens seems appropriate. The state settlement already includes a provision -- which I understand that is not agreed to, but that

I think is a good model for what would work here.

Under the state settlement, Google has already agreed to reduce the -- that friction down, the key parts of that, this unknown source of setting and warnings and all this stuff, down to one screen.

There's just a single screen. It has a, you know, condensed message warning the user, "Click once, you've authorized the source to download things." So I think just to suggest -- I think that achieves the goal.

Second --

THE COURT: Can I just -- now, your understanding is that's totally divorced from any actual tech issues.

In other words, what you're proposing is there will be one screen saying whatever it is: You're leaving the Google ecosystem. You may be subject to problems. Are you okay with this?

I'm paraphrasing.

DR. GENTZKOW: Yeah.

THE COURT: And then after that, they say yes, and they're done, and there's no other friction from Google.

DR. GENTZKOW: That is what is in the state settlement. I just want to be clear. There are some -- there are some other things like, for example, if you're using a browser, whenever you download something from a browser, there is usually another wanting that just says: Are you sure you

want to download this thing?

THE COURT: Oh, sure. Firefox may have its own thing. That's not Google. I'm just talking about Google.

DR. GENTZKOW: Chrome also has those things --

THE COURT: Okay. Chrome. But that's -- yeah. All right.

DR. GENTZKOW: Yeah.

So, but I think, essentially, that already has reduced that friction to one screen, and I think that's a good model.

I want to respond really strongly to what Dr. Bernheim said about parity, because I think a fundamental issue here is that apps downloaded from these different sources are not equal. The risks associated with an app downloaded from Play and the risk associated with an app -- you know, we're talking about things that extend out to, like, my mother gets a text message that looks like it's from FedEx, and it has a link that says, "Hey, click here to download on app to track your package." And she clicks on it, and an app is installed and it can see her financial information, steal -- so that's what we're talking about.

I don't think parity is appropriate in thinking about: We want to have user choice, but what is the information that needs to be provided to the user?

It had better be different if Google knows that you clicked a link in a text message and you're coming to a source

that looks like that, versus --

THE COURT: Well, let me -- my goal is to avoid getting into any of that.

I just want to -- the testimony at trial was it's the friction that causes a problem. I don't -- there wasn't testimony at trial that I recall saying sideloading is causing people to lose all their bank account money because it's nothing but, you know, overseas malware.

It was really just Google is putting all these screens in to actively discourage people from shopping from another site. That's the antitrust issue. That's what I want to address.

I don't see actually any reason to get into the actual, you know, nondiscriminatory, non- -- you know, parity. I just -- I don't -- I don't see that. I mean, I don't see how not addressing that would actually adversely affect the remedy.

In other words, why, from an antitrust perspective, would I have to address that? I don't see a reason to. As long as the friction point is eliminated, a consumer knowingly and intelligently volunteers to download, isn't that the end of the issue from an antitrust point of view?

DR. BERNHEIM: Well, I think you have to be, again, worried about conduct that is not the same as the conduct that we observed but conduct that Google could switch to that accomplishes the same end.

If Google is in a position to start declaring, you know,

all competing stores' security risks, then, you know, there's a problem with that.

DR. GENTZKOW: If I could say --

THE COURT: In other words, putting the warning screen up on every store to kind of scare people at the get-go?

DR. BERNHEIM: Yeah. So when Professor Gentzkow is making the point that, in an ideal world, you would use the information that some app stores are presenting greater risks than others and you'd fine-tune that, and that you need to be able to discriminate to do that.

And that is true about the ideal world, but I think what we learned through the trial is that Google abuses the discretion to do that when they have the ability to discriminate. They do lots of things that make it difficult for competitors. They don't make that decision based on what's ideal for customers. They make that decision based on what delivers the greatest profits to Google, what enlarges Google's slice of the pie; and that is what we have to worry about.

THE COURT: Well, I -- I agree to -- on the concept. But what I'm suggesting is the reasonable accommodation is instead of the abysmal -- quote/unquote, abysmal 12- or 16-screen forced march, you have one screen and one screen only.

Isn't that -- that seems reasonable from an antitrust perspective. I think it is perfectly fine for Google to say:

Just be aware, this is not our product. Don't call me when something bad happens. It's not our thing. Please indicate affirmatively you understand this by clicking "yes," and then have a great time in the app store.

I mean, what's wrong with that?

DR. BERNHEIM: Well, deciding how far to go on this is certainly a judgment call and --

THE COURT: But I'm just saying, from an antitrust, anticompetitive conduct, that seems to solve the issue of the friction point.

DR. BERNHEIM: Narrowly construed, yes.

THE COURT: All right.

DR. BERNHEIM: The concern would be, more generally, the friction point is about manipulating security issues to discriminate against competitors. Using security issues as a smoke screen for disadvantaging competitors. And that would be the logic of having a nondiscrimination requirement here, is you can do whatever you want with security but you can't do it in a way that disadvantages the competitors.

THE COURT: Okay. Okay. To my ear, that wraps up app billing store.

DR. GENTZKOW: Could I make one --

THE COURT: Yeah, closing point.

DR. GENTZKOW: -- point on that, Your Honor?

THE COURT: Yes, please.

DR. GENTZKOW: Is that okay?

THE COURT: Yeah.

DR. GENTZKOW: I would --

THE COURT: Or app distribution store, not app billing.

DR. GENTZKOW: Yeah, if I could, just on the security stuff.

THE COURT: Yes. Yep. Go ahead.

DR. GENTZKOW: All right. So I think, number one, I just want to flag that tying Google's hands on dealing with security in order to deal with hypothetical future anticompetitive new things they might dream up to do is a really risky proposition.

THE COURT: I agree with that, and I don't intend to do it. I'm just going to say --

DR. GENTZKOW: That's great --

THE COURT: -- you have to reduce --

DR. GENTZKOW: I understood --

THE COURT: However, let me just be clear, we're reducing the abysmal experience designed to discourage people from not using Google Play Store; that was anticompetitive. But if it turns out that the one screen becomes a Trojan horse, the injunction is going to have a period of time when people come back to me.

DR. GENTZKOW: Yeah.

THE COURT: So that's --

DR. GENTZKOW: Yeah, I think that's appropriate. And so, just two other small points.

One, I think it's important -- you mentioned consumer choice -- just that Google have the discretion to base those warnings on signals that they have about the security risks of different kinds of apps. And there are cases where Google has information that a particular app -- like in the example I described -- has actual specific red flags associated with it that make it a higher risk, and having some discretion to reasonably deal with those kinds of cases, I think, is important.

And then last, I would just note that that example about the app sideloaded on a phone that is stealing financial information was not a hypothetical example. There is something called the FluBot virus that did that, and was distributed --

THE COURT: No, I -- I'm quite aware of that. But that can happen on a Google phone with no third party involved. If your mother or my mother pushes that thing, it's going to happen. It doesn't matter whether it's in an app store or not.

DR. GENTZKOW: We're just trying to make it less likely to happen.

THE COURT: Yeah. So, I mean, everybody is equally vulnerable, is my point.

DR. GENTZKOW: We don't want to make them more

vulnerable.

THE COURT: We're not. They're equally vulnerable, but anyway.

Okay. Can we move to Google billing? Is that going to be a different team?

Okay.

DR. TADELIS: Same team, different name. Steven Tadelis.

THE COURT: Tadelis.

DR. TADELIS: Thank you, Your Honor.

THE COURT: Of course. All right. This one may be a little more straightforward, I don't know, but --

DR. TADELIS: Straightforward, I would probably say.

THE COURT: So I think we have the benefit now of how concrete and specific I would like the discussion to be, so I'll let you take it from there.

DR. TADELIS: I will be very concrete and specific.

So Remedy Number 1, the jury found an illegal tie. The remedy should be to sever the tie. And when I use the term "sever the tie," I mean, it in two ways.

First, the physical severing, so, no, you don't need to use Google Play Billing in any form or shape.

And two, I mean a lack of an economic tie that Google could do through strategically engineering prices in a way that would basically discourage the use of alternative billing

solutions.

The second, the jury found that Google willingly engaged in anticompetitive conduct to establish or maintain monopoly in billing. As part of the remedy there, no anti-steering -- so to allow the developers to steer users to use different ways of paying.

And then, finally, making sure that through the -- all the other levers of power that Google has, not to undermine these two remedies. Simple.

THE COURT: Well, okay, let -- we need to unpack all that.

So for severing the tie, the proposition would be a developer is perfectly free to bill for in-app services using any system they want -- their own, Stripe -- you know, whoever -- or Google.

DR. TADELIS: Correct.

THE COURT: Okay. So that's Proposition 1.

The developers are perfectly free to tell customers who may be paying through Google Pay, "why don't you try us? We'll give you frequent-flyer points or whatever. It's going to be a lower -- lower price" -- whatever they work out.

Okay. That's fine.

Here is the issue that has been bothering me since trial. So there was an abundance of testimony that, even under this user-choice proposal, Google was still asking developers to pay

something like 27 percent. It was about a 3 percent discount, which turned out to be nothing, because if you don't use Google Play, you've got to pay somebody, and that usually paid them 3 or 4 percent. So you ended up still paying 30 percent, it's just that only 27 percent went to Google as opposed to the full 30.

So what do you do about that 27 percent?

DR. TADELIS: So it was 26, but who's counting.

THE COURT: Yeah. All right. Okay. You are, you're the economist.

DR. TADELIS: So I have no beef with Google charging 26 percent or 16 percent or 73 percent for whatever they want to charge on distribution.

My beef is with the delta between charging without Google Play Billing and charging with Google Play Billing.

In other words, the added fee to use Google Play Billing, on top of all the other benefits they claim developers are getting, should be no less than the cost for Google to deliver those services; and currently that 4 percent is less than their cost.

So going exactly to your concern, if I'm a developer and now Google is offering me user-choice billing -- which, importantly, does not sever the tie physically; user-choice billing says you could use something else in addition to Google Play Billing.

THE COURT: I'm with you on that. Let's assume --

DR. TADELIS: But let's assume there is --

THE COURT: It's all gone.

DR. TADELIS: -- a tie but they just --

THE COURT: It's a new day. A developer can do anything he or she wants.

DR. TADELIS: Perfect.

And then Google says, "If you want to use our system completely, including Google Play Billing, you'll pay us, say, 30 percent. If you don't want to use Google Play Billing, you're going to pay us 26 percent" -- which means that to not use Google Play Billing, it would only be beneficial for a developer if they could find a payment solution product that is less than 4 percent.

That doesn't exist today because the costs of a billing solution product are higher than 4 percent.

THE COURT: Well, then how would you formulate what Google could do?

DR. TADELIS: So from testimony I gave at trial and documents that Google produced, Google's -- Google currently believes that their average cost is about 6 percent. So that would be a floor on what they could charge for the added use of Google Play Billing.

In the remedy, there's actually a call for Google to release that number to the -- I forget the name of the

committee. It's not the audit committee --

THE COURT: Yeah. I should jump in.

We're not doing committees.

DR. TADELIS: Okay.

THE COURT: If there's an issue with enforcement, you will turn to the Court, but I'm not --

DR. TADELIS: Then Google will --

THE COURT: We're not -- that's -- that's way too much for this case.

But I'm not sure I'm understanding. So here's what I'm thinking: A developer decides to use her own billing system. It's a completely self-contained ecosystem. You buy through my app, you pay me through my billing system. Okay. Nothing to do with Google other than being on the Google --

DR. TADELIS: It was like a different app store?

THE COURT: Well, no, they're -- they're on a Google app store --

DR. TADELIS: Oh, they're on a Google app store.

THE COURT: -- but they're going to do all of their business with you, financially, as a user, through their own in-app billing service that doesn't use Google Pay.

So you're saying that Google should be able to charge that developer 6 percent of that transaction?

DR. TADELIS: No. I'm saying that Google would not be charging them for billing. I'm not preventing Google from

charging for the fact that they have been discovered through Google Play -- the Google Play Store, et cetera.

If Google is providing -- let's make it simple -- two different services, distribute through Google Play, don't use Google Play Billing, there's going to be a fee for that.

THE COURT: And how does this stop -- how is that fee to be set?

DR. TADELIS: Google decides what that fee is.

THE COURT: Okay. And the idea is that if Google sets it too high, the developer will just opt out?

DR. TADELIS: The developer might choose not to distribute through Google Play.

THE COURT: Okay. So I don't have to be involved in regulating that fee at all?

DR. TADELIS: Absolutely not.

THE COURT: Okay. So in other words, your proposal is just -- just -- just decouple billing --

DR. TADELIS: It's decoupling --

THE COURT: -- from Google billing.

DR. TADELIS: -- and making sure that the extra cost to use Google Play Billing is no less -- the extra price, or fee, to use Google Play Billing is no less than the cost for Google to provide that product.

THE COURT: Why do I have to give antitrust attention to that?

If the developer can do whatever he or she wants, what difference does it make?

DR. TADELIS: Could I direct you to one of the slides that I actually used in testimony, Your Honor?

THE COURT: I don't have that here.

DR. TADELIS: Oh, no. It's in the -- oh, sorry.

(Pause in proceedings.)

THE COURT: Okay.

DR. TADELIS: This is Slide Number 8 --

THE COURT: Yes.

DR. TADELIS: -- in my slide deck.

This is a slide that I used in my testimony, and it -- it's a slide that comes from Google. I have added on what you see here in red.

And what Google did in this slide, as part of their internal deliberations, they called it game theorizing price level. "Game theory" is a fancy word for a set of tools to analyze strategic interactions. So this is basically strategically choosing a price level.

They start by saying: Some large developers would take advantage of billing optionality no matter the price.

What they mean by that is, they'll say, "You can use Google Play Billing. We're charging you 30 percent. If you don't use Google Play Billing, we're still charging you 30 percent."

They might still choose to do that. That's that initial jump you see at the very left where it goes, like, from zero to the core strategic asset. And that's trying to describe those developers who would choose their own billing system regardless of the fee.

Now, what they next do is show that you have to give enough of a discount -- that's what you call on the billing optionality discount on top -- to reach that zone where you see the blue line curving up; that's when developers would start integrating alternative billing solutions.

So what's the idea there?

So let's take the current user choice billing that we know. Google says: If you're not using Google Play Billing, we're only going to charge you 26 percent. Use whatever you want.

Now, of course, if any billing solution is going to cost me more than 4 percent, I, as a developer, would make a mistake by choosing that, so I'll just stick with Google Play Billing. That's why that blueline is not budging when you go from 30 to 26.

It's only when you go to something, and again, if this graph is done to scale, which I'm assuming here, you'd have to go down to something like 22, 21 percent to start getting that pickup -- which makes sense because if you would actually turn to what is Slide 3 in the deck that I just gave you, you see

that pretty much if you ignore micropayments, nothing is cheaper than 6.1 percent as a billing solution.

And Square, for example, is not that prominent. If we take PayPal, that's a very prominent global provider, 8.8 percent. That would mean that that discount would have to be on the order of 9 percent for a developer to say, "Okay. I will now use PayPal instead of Google Play Billing."

That's what this describes here.

So what Google is able to do by playing with these two prices, the bundle versus only distribution, is replace the coercive tie with a tie through economic incentives. And as long as they're pricing the delta below their costs, this is not different, conceptually, from predatory pricing, so to speak. That's the idea here.

THE COURT: In other words -- that makes sense to me. So no below-cost pricing, basically. Okay.

DR. TADELIS: Exactly.

THE COURT: And is it your understanding that costs is something that can be easily determined through GAAP procedures?

I mean, I hear in other cases tremendous fights about what constitutes cost. So this has to be something that is a readily measurable number.

DR. TADELIS: Yes, I believe that is feasible, not too difficult.

THE COURT: Why do you believe that?

DR. TADELIS: Here's what I would look for. I've been teaching cost allocations for economic decisions for about 20 years, so I'm going to share exactly what I would share in my MBA classroom.

If we take the product Google Play Billing, there are going to be costs associated with it. Those costs are going to start with the obvious variable costs of payment processing. Those are typically on the order of 2 1/2 to 3-plus percent.

Then on top of that, you're going to need, say, servers that are dedicated to that. You're going to need customer service to deal with fraud, and you're going to need some engineering that deals with fraud detection. In other words, there will be someone at Google who is in charge of Google Play Billing. There will be an army of people and services under that person that is part of that business.

The test that I want is simple: If you shut that down, what falls off your balance sheet?

Those are the costs.

THE COURT: Did we see any records to that effect at the trial? I don't remember.

DR. TADELIS: I have not seen records of that.

THE COURT: We saw some cost records, as I recall, but was it for this?

MR. EVEN: I believe what we saw, internal analysis by

Google that reached a bottom-line number in the 6 to -- I think in the 6 percent range where Google said, "At 6 percent, we think we're kind of breaking even, and we think that the cost to developers from others would be 10 percent."

THE COURT: We did see some internal Google financial documents calculating the cost of the 6 percent figure.

MR. EVEN: I believe they were kind of strategic analysis of Google in other areas where they said, "We talked to the finance folks, and the finance folks told us 6 percent is, more or less, roughly our internal cost."

Back at the time. Obviously, these things changes from year over year.

THE COURT: All right. Thank you. Okay.

MR. POMERANTZ: My name is Glenn Pomerantz.

That is not what that evidence showed. That was not the financial analysis as -- I think Mr. Even was saying it was strategic analysis.

The kind you're talking about, really a careful consideration of the costs, that's not what was in evidence in this case.

THE COURT: Okay. I'll go back and look, but all right.

Okay. Well, who's handling this for the defendant?

Dr. Leonard. Okay.

DR. LEONARD: I think this --

THE COURT: It seems like a relatively straightforward solution from your colleague.

DR. LEONARD: Well, I'll disagree with that a little bit.

First of all, I'm Greg Leonard, just to identify myself.

Let me just start at the end. Is 4 percent, you know, enough of a floor on the price of Google Play Billing for rivals to complete?

We actually have evidence about that because we have developers in the case who testified about it. And, in fact, Mr. Sweeney testified that to get -- I think he called it an equivalent to Google Play Billing would be 2 to 4 percent. So 4 percent, obviously, should be enough for Epic to do it.

There are other -- if you look at -- I don't want to go through them all, but on page 12 of my slide deck, you'll see some other evidence that I summarized on that point.

The other thing I want to get to is: If the floor is to be set according to cost, there's, first of all, a question of what cost are we talking about?

And Your Honor may be familiar in antitrust predatory pricing cases, you know, you could look at average variable cost.

Here, as I understand the proposed injunction, they're saying you should look at average total cost. And that really has the danger of chilling competition -- right? -- because it

would prevent Google from discounting their price for Google Play Billing to meet competition that might be a price above their variable cost, and then it would mean the transactions would contribute to their variable profit and contribute to paying their fixed costs.

THE COURT: So you would use average variable costs?

DR. LEONARD: Well, if you were going to do this at all. But now let me get to my real point, which is, if I were Your Honor, I would not want to be engaging every year in proceedings on what Google's costs are, and that's definitely going to happen.

THE COURT: I don't intend to. If someone has a problem with it, they can come back and say you're cheating. But I don't intend to be proactive. This is just -- sets a rule for other people to test. I'm not going to do it. I'm not an accountant. I'm not --

DR. LEONARD: No, no, I understand. But what I'm saying is I think you'll get those proceedings whether you want them or not.

THE COURT: If they're good, then they'll win; and if they're frivolous, they'll be dismissed. I mean, that just sort of comes with injunctions.

But what I'm looking for now is -- so the proposition is: Sever the tie with Google -- Google billing.

And that seems perfectly appropriate given the antitrust

verdict. Is there any reason that you would say it's not?

DR. LEONARD: Well, I think Dr. Gentzkow actually will address that part of it. I was really going to talk about the billing. But let me just say a couple of things about it because I do have some thoughts about it.

I mean, Number 1 is, user choice billing does sever the tie in the sense that there's going to be an alternative billing system, if a developer wants to do it, up there that a user can choose from.

And secondly, if you think about this --

THE COURT: That's not consistent with the evidence at trial.

DR. LEONARD: In what sense?

THE COURT: User play billing was not a true alternative and looked -- the conclusion of the jury from the evidence that I see is that that was a fig leaf, not a decoupling of a tie.

So, you know, I'm not going to have a situation where Google gets, in all circumstances, to tell every developer: You most offer our billing system.

You must offer it? No. They can bargain for that. Developers can negotiate that. If they want to do, that's fine.

It's none of my business, but I'm not going to get into a situation, given the evidence at trial, where Google can shove

that down developers' throats. That's just not going to happen.

So what I would like to hear is a very straightforward proposition. Just decouple and let developers bill any way they want. They may choose Google. They may choose not.

But what's wrong with that from an antitrust perspective?

DR. LEONARD: Well, I think that there are reasons why users -- from a developer's point of view, that may be what a developer would want. But from a user's point of view, as I understand, users may want to have a single -- an option to have a single billing system on all the apps that they might purchase or are making that purchases from.

And that's one, I think, reason to have Google Play Billing alongside an alternative billing system. And if you think about it, Google --

THE COURT: But isn't that something a developer would rapidly pick up on? I mean, if consumers -- okay. What I hear you saying -- maybe I'm wrong, you can correct me.

You're saying: Consumers may want single-point billing. All right? No matter where they shop, they want to have just one pay point. They don't want to have to give their credit card five different times to five different stores.

Okay. That's fine. But if they don't want to do that, they won't buy from that store, and the developer will rapidly realize this was a bad idea. We'll do something else.

But that's exactly what we want to do. We want to open up the opportunity to compete. Let developers and users make these choices which they cannot do now because they must use Google's proprietary system.

That's what we're trying to get at. I just don't see anything wrong -- I mean, yes, of course, there may be some decision points down the road as the system shakes out. That's not a reason not to do it.

DR. TADELIS: May I add something, Your Honor?

THE COURT: Yeah.

DR. TADELIS: Even now, Google being the monopolist doesn't offer unified billing for their users because they prohibit the use of Google Play Billing for physical good apps.

THE COURT: Oh, yes. That's right. I remember that.

DR. TADELIS: Because on Amazon you can't use Google Play Billing, and on Uber you can't use Google Play Billing, and on Walmart -- and we could stay here for five more hours and me listing all those --

THE COURT: Well, the relevant argument was just digital services --

DR. TADELIS: I understand.

THE COURT: -- for that reason.

DR. TADELIS: Exactly.

THE COURT: It was for that reason. I do know that. So that -- that is an important observation because those are

huge touchpoints in the app world. But anyway -- okay. Go ahead.

DR. GENTZKOW: Let me just jump in with one small point, and then I'll hand it back to Dr. Leonard.

This is Matthew Gentzkow again. Thanks.

Just on the question of whether developers can do this themselves if there's an incentive to, I think the one thing that's important from an economic point of view to recognize is this offering users of digital goods a unified billing system has the property of a collective action problem because that's a benefit that you get when there's consistency across all of the apps.

THE COURT: But just to jump in, we just were reminded, timely, that that, in fact, is not true for an enormous number of the highest end apps. Walmart, Amazon, Uber, you don't do it. You can't pay through Google.

So it already exists that you can't -- the Google world is already fragmented that way.

DR. GENTZKOW: It is fragmented in the sense that there are different things for physical goods. But for digital goods, there's a specific value to consistency. Things like being able to track all of my subscriptions; parental controls on apps that I can use across all of the apps; being able to get refunds for digital goods that I've purchased in different apps.

Those are all things where what I need is consistency across the set of digital goods that I have purchased, and that's something which provides a collective benefit to users when it's consistent. And an individual developer may have financial incentives to do something different that's not -- they are not individually going to take a count of what is the cost of imposing or creating that inconsistency. So I think that's the one sense --

THE COURT: That may be true, but if the consumer doesn't like that, they won't do business with that app store If they say, "I'm a busy person and I hate doing math. I just want to have one place where I put my credit card," they won't do business with an app store that doesn't offer that. So the market will correct, and the app store will go out of business maybe, or lose an enormous amount of revenue.

So I'm not -- I'm just -- this is akin to the argument of we need to be a monopoly to protect you. Now you're saying we need to be a monopoly because, you know, the consumer's life is going to require payment headaches. That's not -- I'm not buying that.

DR. GENTZKOW: Yeah. I just -- I just want to be clear that, in that instance, if a developer decides to offer a different billing system and chooses not to offer the consistent one, the costs of that don't just fall on that developer or that developer's immediate user as they fall more

broadly. So there is a form of collective action problem there in making that decision.

THE COURT: Okay.

DR. TADELIS: I could just restate what you said, Your Honor. If I --

THE COURT: Do it for me.

DR. TADELIS: If I am an app developer and I'm going to want to use my own system and it's going to say you have to put in your credentials and say 30 percent or 60 percent of users don't like that hassle, there will be another app developer who could create the exact same app and use Google Play Billing and get all those customers, all those users to use their app.

THE COURT: Another competition point.

DR. TADELIS: That's the competition point, exactly.

THE COURT: Another opportunity to compete. Okay.

Well, that seems to solve Google billing.

Is there anything else?

DR. TADELIS: Could I just make a comment about the average variable costs that --

THE COURT: Yes, please. Yeah.

DR. TADELIS: -- put in?

I think that's erroneous for at least two reasons, and I also think that I'm being conservative in what I'm suggesting or what the remedy is suggesting.

First of all, the way I understand it, the whole debate about average variable/average total is to determine liability. Liability was determined here already in court. And now we're asking: How do we make sure that competition could prevail in billing solutions?

Second, if I think about the following: Right now, there's only one product. It's Google Play Billing. So whatever Google has to spend annually to maintain that product, any other provider is going to have to spend similarly unless they're more efficient -- which of course, they should have a benefit from being more efficient.

What I'm not including here is any sunk costs that Google may have incurred years ago in developing the first stage, which means that this is disadvantaging de novo suppliers of these type of billing solutions. So PayPal, Stripe, clearly, they already are in this business. But if someone new wants to come in, they would even have to invest sunk costs that are not even measured as part of the ongoing business.

THE COURT: Is that something that could be solved with a two-year horizon? Or I mean, maybe --

DR. TADELIS: Oh, no, no. This is not about the two-year horizon. This is just about -- this is an ongoing business that operates and provides billing solutions. That business is going to have to spend, not only those variable costs that we discussed -- payment processing -- but a whole

host of other costs that should be on the ledger of any reasonable accounting, from what I understand.

THE COURT: What do you -- just -- this may be unfair to ask on the fly, but can you ballpark what the difference would be between using average variable cost and average total cost?

DR. TADELIS: Oh, sure. So Dr. Leonard, in his report, quotes Sweeney -- Mr. Sweeney, as well as others, that are throwing out numbers of the 2.6, 3, 3.2. Those are all payment processing. Those are not payment solutions.

There was testimony in this courtroom, I believe by Mr. Allison, who heads the Epic store, where he, I believe, quoted that the payment processing is somewhere between 4 and 6 percent. And, again, I want to --

THE COURT: There was a lot of evidence about 6 percent being kind of the conver- -- figure on which multiple people converged. Yeah.

DR. LEONARD: Your Honor, can I -- if I may?

THE COURT: Just before -- let him just finish this.

DR. LEONARD: Okay.

DR. TADELIS: So here we see these companies that are providing -- this is Slide Number 3 -- that are providing payment processing solutions for -- payment solution products for web, right, because they're not allowed on Android. And we see these numbers all seem to be in this similar ballpark, 6.1,

6, 8.8, and there are many others.

And these are companies for whom payment solutions is their bread and butter. You'd expect them to be relatively efficient. And there is competition here. These prices are meaningful. All the prices we see on Google Play are not meaningful because they're happening within the bubble of a monopoly.

THE COURT: Okay.

DR. LEONARD: And I would say that -- I mean, who knows what these numbers are for, what kind of bells and whistles are being offered here that a developer may not need? And we shouldn't be valuing this at the bell-and-whistle price. We should be figuring out what the cost would be for a developer to get processing.

And, again, we have testimony, including from Mr. Sweeney, about the numbers there. So that's Point Number 1.

Point Number 2 is, it's not easy to figure out what Google's costs are. Remember, that's what the proposal says; it says it would be Google's cost, average total cost of processing.

Dr. Tadelis said, "Oh, there must be a group of people at Google who do Google Play Billing customer support." It actually turns out not to be true. This I actually know. The cost for customer support are for all of Play. And some of those people may work on Google Play issues, but figuring out

how much of their costs would be associated with Google Play Billing versus other aspects of Play -- which, of course, are significant -- would be very difficult and would require --

THE COURT: Well, then if that's fair, then we have to use a proxy, and the proxy would be the numbers in Slide 3.

I mean, look, I'm not going to -- this has also been a consistent theme in Google's objections. "It's just too hard to do. We can't figure it out."

Okay. Then if you can't do it, we'll go to a proxy, and the best next proxy is 6.1 percent from Stripe.

DR. LEONARD: I think -- but shouldn't it be what the developers themselves said it should be, which is less than 4 percent?

THE COURT: Sweeney is one developer. There are 3 million -- there are 3 million apps. 3 million different developers may be --

DR. TADELIS: Mr. Sweeney talked about payment processing.

THE COURT: What's that?

DR. TADELIS: Mr. Sweeney spoke about payment processing.

THE COURT: Talked about payment processing. So if you-all can't do it, the answer is -- and it doesn't get done -- the answer is, I'll take the next best substitute, which is probably one of these numbers.

DR. LEONARD: Yeah. But I'm saying to you that I don't think those numbers are the accurate number that you would want to use, and that the testimony we got from developers --

THE COURT: Let me put it this way: There's going to be a number. And if you can't give it to me, I will take what I think is the next best reasonable -- look, this is -- the touchstone here is reasonable.

Okay?

DR. LEONARD: Right.

THE COURT: We all know what Stripe does. They process financial transactions for other people.

If Google is going to process a financial transaction for a third-party developer -- okay? -- why is it different from Stripe?

If you can't come up with a number yourself because it's too hard and your accounting doesn't do it, nobody knows, I don't have an alternative but to take a proxy.

DR. LEONARD: Well, again, I think 4 percent is the number, so I'm offering that up to you based, again, on what developers themselves said.

Also, Google's own costs, the 6 percent, that's -- turns out to be quite high because there are certain relatively rarely used forms of payment that Google offers, like direct carrier billing that are very expensive. But I find it very

doubtful than an entrant into the space would offer those.

Google sort of offered them as a legacy-type thing. They've been declining over time, but they do push up that 6 percent -- to 6 percent. If you look just at credit cards, debit cards, PayPal, the number is more like, again, 4 percent or less.

So I think 4 percent is a reasonable number to do here. And remember, this is going to be the floor on what Google Play Billing can charge. So if that floor is too high and Google Play -- Google can charge -- is constrained on how much they can cut their price to compete, there's going to be less competition, and there's going to be higher prices in the marketplace overall.

So I think it's pretty important to get, as you said, a reasonable number here that will not chill competition from Google. Yes, we want to try to correct the issues that exist in the marketplace, but at the same time, we also don't want to overly handcuff Google.

THE COURT: Oh, for sure. That goes without -- I understand, but I'm not going to accept "We don't know, so do whatever you want." That is --

DR. LEONARD: No, no. Yeah. And I'm not offering that. I'm saying 4 percent is the right number.

THE COURT: All right.

DR. LEONARD: Could I just add one other thing?

THE COURT: Sure. Yeah.

DR. LEONARD: I mean, the logic of this is that there was market power in app distribution, and that created the ability for Google to form the tie and then have market power in this billing system stuff.

It seems to me that once you've got strong remedies which, Your Honor, of course is --

THE COURT: On the app?

DR. LEONARD: Distribution side -- it solves itself. And you're probably going to get, you know, vertically-integrated firms competing -- in other words, ones that have their own billing system -- they're going to come in and they're going to be app store with a billing system; they're going to compete with Play. And in that situation, you don't really have to worry about the price of Google Play.

THE COURT: I'm glad you mentioned it because I am thinking. Look, I want to make -- the injunction has to be crystal clear, simple, and direct. So, obviously, both as a legal matter, tying, and just as a conceptual matter, it has occurred to me that the reforms that maybe I may order for the app distribution market are going to have impacts on how people bill. And so why not just say: You cannot require anyone to use -- any developer to use Google billing system.

Stop. Just stop at that point.

Why isn't that enough?

DR. TADELIS: The reason is that all the remedies that Dr. Bernheim explained in order to open up competition distribution are necessary. They do not guarantee that Google will be dislodged from its strong monopoly position at the moment because it has those two sides of the market there.

Remember that we discussed or -- here in the courtroom, this whole idea of these apps are going to try, they're going to get the catalog, but after two years, if they don't get enough traction, they're just going to die; that is a possibility.

There is a possibility if the only thing we do is everything we discussed and sever the tie, but don't put limits on Google Play Billing add-on price that creates an economic tie, that in four years, or six years, we are exactly where we are today, everything expires and --

THE COURT: I don't see how that would be true. If there are fundamental reforms in the app distribution market, and I decouple Google Play Billing from Google App Store, totally, can't require anybody to use it, no user choice, none of that --

DR. TADELIS: Right.

THE COURT: -- it seems to be the world fixes itself, and I don't have to worry about 4 percent, 6 percent, Stripe, or anything else.

And I'm really not attracted to the idea of having

vagaries like average total cost, average variable cost. It just doesn't make a lot of sense to me.

So I am not hearing a good reason why not just to stop there from an antitrust perspective.

DR. BERNHEIM: May I, Your Honor?

THE COURT: Ask your colleague.

DR. TADELIS: I have something I would like to say about that.

THE COURT: Okay. Please.

DR. BERNHEIM: My concern there isn't so much that the other remedies will fail. My concern is that the other remedies will take time to work.

THE COURT: Yes.

DR. BERNHEIM: Because competition doesn't burst out all of a sudden. So there will be a period of time during which Google Play continues to have monopoly power, probably several years.

During that period of time, if it uses that monopoly power to effectuate a tie which was found to be, by itself, a violation of the antitrust law, it's doing something, you know, that the other -- that is -- that is contrary to the antitrust law, that the other remedies may resolve and probably will resolve in a longer term, but not during this shorter period of time.

THE COURT: Okay. So you're saying there's going to

be a covert or de facto tie, but how?

I mean, if -- let's say I take, across the board, everything we've discussed in the app store side and ban the forced use of Google Play Billing, I just -- I'm not seeing how a covert tie can emerge even for a six-year period.

DR. TADELIS: Let me explain that, Your Honor.

So here we could go back to Slide Number 8.

THE COURT: Eight. Okay.

DR. TADELIS: Yes.

So Google chose the 4 percent not based on cost, because we've seen an internal document where they estimated their break-even cost to be 6 percent.

The 4 percent was set in a very safe zone where, if we charged 30 percent for everything and only 26 percent for distribution without GPB, it is in no developer's incentive economically to adopt anything but GPB. Because if we go back to Slide 3, everything else is going to cost 6 percent or more, I might as well pay 30 than 32 or 33 or 38.

So by allowing Google to strategically manipulate the difference between fees with and fees without billing solutions, they could effectively create an economic tie that works just as good as the coercive tie.

We need to create a gap that's large enough for a reasonable competitor, like Stripe, to come in and say, "We could offer this service. We could offer it as cheap or maybe

even a bit cheaper than Google," because it is their bread and butter. And now a developer will have the incentive to pay Google the fat fee for distribution and pay a smaller fee for the add-on --

THE COURT: If that's the case -- I understand what you're saying.

If that's the case, why look at Google's costs at all? Why not just look at what is the most efficient rival able to offer as an alternative and use that?

DR. TADELIS: So I don't want to prevent Google from competing on the merits. Let's imagine that tomorrow, after an injunction is put in place, Mr. Pichai says, "Okay. We need to make our billing system the best, the fastest, the nimblest that we can. I'm going to take 500 engineers from Search and 200 engineers from Play, and put them on Google Play Billing," and in six months Google manages to create a product that is actually less costly than Stripe or Square --

THE COURT: Maybe they can actually do 4 percent.

DR. TADELIS: Maybe they can. I don't want to prevent them from being able to compete on the merits.

Now, if you feel more comfortable saying, "Well, from Slide 3, I see there is a competitive market where the lowest places seem to be around 6, even 5.5 from micropayments, but that's a bit of an anomaly, so 6. I feel comfortable that that is representative of an efficient competitive solution," then

all power to you, Your Honor.

But then if Google is able to do something more effectively and show that their costs are cheaper, then that would put them at a disadvantage.

THE COURT: Well, why not put the burden on Google to do that then? They can come in and tell me.

DR. TADELIS: That's your choice, Your Honor.

THE COURT: I mean, I would set Stripe 6 percent, PayPal, whatever it is. And Google innovates and wants me to do a different number, they can come and prove it.

DR. TADELIS: I'm perfectly fine with that.

THE COURT: I just don't want to be involved in adjudicating costs. It's just not the right thing for a federal judge to be doing. Once is probably too much, but certainly not a constant basis.

So why not just do that? You can always come back and tell me, "We've cracked the code, and we can deliver all this for 3 percent now."

DR. LEONARD: I think the problem is: Where do these Stripe numbers come from?

I mean, are these offers that Stripe made to actually process and handle transactions within Play? Because if they weren't, then I don't know that it's really a good estimate of what Stripe would be willing to do.

THE COURT: If you want me to use 4 and they want 6,

I'll do 5. I mean, this is how things get done in a reasonable fashion. I'll do 5. I have no touchpoint or data from you, Google -- not you personally -- from Google that gives me any number whatsoever, and all I hear is "We can't tell you."

So the answer is going to be: I have to do something to replace that. So if you don't like 6 percent, and you think Mr. Sweeney has committed to 4, then I'll take the average. I'll take the middle number, 5.

I mean, I just need a reasonable proxy, and that's really all that we get here. But it has to be concrete and does not require me to be a CPA in my spare time, which I am not.

DR. LEONARD: Something else, again, I'd just urge you to look at, is in my statement. I talk about a document, the same one that Dr. Tadelis was looking at, in which Google estimates its costs, again, for various forms of payment.

And for credit cards and debit cards and everything, we're talking about less than 4 percent in the United States. So I really do think that 4 percent is the right number, and I think I've got, again, some evidence that could help you get to that point, Your Honor.

DR. TADELIS: If I may, Your Honor.

THE COURT: Yes.

DR. TADELIS: All the numbers he's referring to are payment processing, not for payment solution products.

THE COURT: I don't think we had any evidence about

payment solution products; did we?

DR. TADELIS: The only evidence that I found coming from Google was that document where they claimed that 6 percent is their break-even.

THE COURT: Okay. This is, I think, all that I need.

Is there anything else plaintiffs would like to raise?

DR. TADELIS: No. I spoke about the anti-steering. I spoke about severing the tie, and then there are the other elements of nondiscrimination based on -- similar to what Dr. Bernheim explained. If you're not using Google Play Billing, you shouldn't be penalized by not having access to other Google products.

THE COURT: Okay. Defendants?

DR. GENTZKOW: Maybe just one point I'd add on the anti-steering that Dr. Tadelis referenced.

The specific way that that's described in the proposed injunction, the one little detail is it eliminates the ability for Google to have minimal user experience and content requirements, like making sure that the form that users are shown is consistent with other billing -- like minimal security requirements.

So I would just say in that anti-steering provision, there is that provision in the state settlement which provides a template of allowing steering of all sorts, advertising prices, promotions, off-app purchases, letting users know about

Google's fees and so --

THE COURT: This is the reverse of the plaintiffs' side. When people start on the defense side saying, "Of course, we have to have minimum security provision," you can drive a truck through that. I mean, that's all in the eye of Google, and I can't do that.

I can't say -- I can't have equally vague -- I can't say "disincentives" is too vague and at the same time say "minimum security provisions" is not too vague. They're both equally vague.

It's late in the day and I've forgotten the henhouse analogy. It's giving the chicken the right to write its own ticket. It's a ridiculously horrible metaphor, but I think you get the point. Okay.

All right. Any larger points, Dr. Gentzkow?

DR. GENTZKOW: No. I think we're good.

THE COURT: Okay. All right.

This was tremendously helpful. I enjoyed the discussion. I enjoyed the professionalism of the comments. I found it to be of considerable aid to the Court, so let me thank both sides.

Now, why don't we have the lawyers come up just for a second.

Here is the one thing that may require some additional testimony; and that is, I would like to know more about the

mechanics necessary for catalog access.

I don't know what that means in terms of what Google might have to do. I don't know whether that is a huge amount of work, whether it's something an engineer can do in an afternoon, whether it's off-the-shelf technology, whether it's custom work; I don't know anything, you know, about what that's going to be.

So how would you like to handle that?

MR. BORNSTEIN: Well, as a starting point, Your Honor, we do have evidence in the record already on that as --

THE COURT: Do we? We do.

MR. BORNSTEIN: As Dr. Bernheim said, we know this is something that Google did through the Alleyoop mechanism in connection with the deal that it had with Facebook and the process it was working on through Project Banyan that ultimately got stopped.

THE COURT: Well, the question I had, though, was Alleyoop really exactly what catalog access would look like here?

MR. BORNSTEIN: It's the same concept, Your Honor, where there would be -- and Banyan is the same thing, where there would be Google as the back end, it would host the apps. It would have the commerce relationship with the -- with the developer.

And then, when the user went onto Facebook, or in the

Banyan example, the Samsung store, there would be a process through which the app would be served to the user who was on one of those alternative sites or stores where Google was working the back end.

It's the same -- the same concept. That's why, frankly, we thought of the remedy this way in order to minimize the problem. We knew Google had already achieved it.

THE COURT: Well, I just don't know whether that could be ported to an infinite number of app stores.

MR. POMERANTZ: Your Honor, that is our --

THE COURT: I mean, I don't really know how that's going to work. And it may be that simple, I don't know, but I don't have evidence right now.

MR. POMERANTZ: Your Honor, there's significant differences, you know, from a technical/mechanical sense for what Epic is asking for here with respect to catalog access and what happened with Alleyoop.

Alleyoop was a test with Facebook and, I think, one or two others in which there had to be a lot of integration between them. It never was rolled out. And it involved -- Facebook already had a relationship with the developers who were involved because they were advertising on Facebook.

This involves a totally different animal.

So I do think Your Honor needs evidence. If Your Honor is seriously considering catalog access, and it sounds like you

are, we definitely need a record for Your Honor to decide whether that really makes sense. We need both to look at the technical implications of it, and we need to look at the economic implications of it.

And more generally, Your Honor, I would request, given the nature of the relief that Epic is seeking that was not addressed at trial -- many of these things were not addressed at trial.

THE COURT: Oh, I don't agree with that. I have been very, very careful to tie all this together. I do not agree with that at all, Mr. Pomerantz.

MR. POMERANTZ: Well, I'll give you --

(Simultaneous cross-talk.)

(Reporter interruption.)

THE COURT: I have been extraordinarily conscious of tying everything we've discussed today to the evidence at trial, and I think the record is going to amply demonstrate that.

MR. POMERANTZ: If I could just --

THE COURT: This is just -- that is just not right to say that this is coming out of left field. I don't agree with that at all.

MR. POMERANTZ: I'll come back to home plate.

The catalog access that we're talking about now was not at all discussed during the trial.

THE COURT: It's a remedy.

MR. POMERANTZ: I know. That's what I'm saying, we need --

THE COURT: It was not part of -- it was not part of the illegal conduct that --

MR. POMERANTZ: Well, that's the point, Your Honor. When the remedy is going beyond the evidence trial, we need to have the opportunity to put evidence in.

THE COURT: No, no. Okay. I -- it's not going beyond the evidence at trial in the sense that it is untethered to the illegal monopoly conduct. That is absolutely not true.

It is supplemental evidence I need to decide with respect to the remedy that I'm inclined to order. That part is true.

But to suggest -- and maybe you're not, but I want to be crystal clear here that this is something that is just dropping out of the heavens and no one has ever had to look at it before because it's completely unrelated to the illegal conduct is not true. It is a consequence that I just need a little more factual information on. So --

MR. POMERANTZ: I was focusing on the supplemental evidence that Your Honor was discussing --

THE COURT: All right. What I would like to do is probably have -- now, I don't know what you need to evaluate whatever Google is going to say. Do you need a deposition? I mean, what -- you need to have a fair opportunity to be

prepared to do your thing.

So how do you want to do that?

MR. BORNSTEIN: I agree with that, Your Honor, because I don't know what Google is going to say. I have -- I mean, I don't think Mr. Pomerantz intended to say, as he did, that Alleyoop was never implemented. The record at trial showed that it actually was implemented in the real world.

THE COURT: He did say it wasn't implemented.

MR. BORNSTEIN: Yeah -- no. I understand that. The evidence showed what it showed. But it -- we absolutely will need to be able to respond.

Your Honor has made the point, I think, fairly that the primary response from Google to pretty much every remedy is: Gosh, Your Honor, that's just so hard.

So I come to this with a fair degree of skepticism about what we're hearing. And I do think we need to have opportunity to have a fair --

THE COURT: All right. Well, let's -- let's just do a plan here. Then I want to talk about the friction thing.

We've got to get this done. This has been going on for a long time. So I want to balance that against your need to be -- each side to be fully and fairly informed.

So here's one way of doing it -- and I'll leave it up to you, you two are probably even better situated to suggest it than I am -- but Google can make a proffer, you could do some

discovery based on that proffer, and deposition -- maybe, if you wanted to retain an expert, I'm reluctant to do that, but if you needed to, you might.

You can do it that way or you could -- I don't know what all -- I don't know what plan B would be.

MR. BORNSTEIN: No, I think it's reasonable, Your Honor, what you've suggested, because we do need to have the proffer --

THE COURT: Okay.

MR. BORNSTEIN: -- and the information. And I was going to get to the point -- Your Honor beat me there -- about trying to be expeditious in making this happen. We're just about, you know, five months from the jury verdict already.

THE COURT: Yeah. Some things happened in between, so it's not entirely a slothful judge, if that's --

MR. BORNSTEIN: I've noticed, but was not about to ask.

THE COURT: Okay. All right.

So why don't you do that, Mr. Pomerantz. Make a proffer and tell your colleague here why you think it's technologically and economically not feasible, or whatever you want to say, and then we'll take a deposition. Make sure you've got somebody ready to go and try to do it in 35 to 45 days. I mean --

MR. POMERANTZ: Your Honor, if I could -- if I could ask a couple of things.

THE COURT: Sure.

MR. POMERANTZ: First, obviously, if when they -- they should give us their response, and if they have a witness, be it an expert or otherwise, we should have the ability to take that person's deposition as well.

I would like to ask, Your Honor, if we could --

THE COURT: Well, they may not. It may just be cross-examination.

MR. POMERANTZ: But it may not be, Your Honor. If they don't have a witness, then that's fine.

THE COURT: All right. Okay.

MR. POMERANTZ: I would ask that we could do that with respect to three specific remedies, because I think they all involve the issues you're talking about: Catalog access, which is the one Your Honor mentioned; the friction issue with sideloading, which is --

THE COURT: No. I think that's -- listen. If you all already agreed in the proposed state settlement that there's going to be one screen and one screen only, I probably will just look at that.

MR. POMERANTZ: If they're okay with that, then that's fine. We don't need to go further.

THE COURT: It's really a matter more what I'm okay with. If I'm okay with it --

MR. POMERANTZ: Okay. You'll let us know if there's

anything more --

THE COURT: Now, I want to look at that provision, and if it truly is one screen, one screen only, "Here's what you're doing. Be aware of it, and good luck," I'll probably think about that. All right?

In fact, that's really all I need for right now. Now, if I change my mind, I'll let you know.

MR. POMERANTZ: Your Honor, there's one other remedy that I'd ask the opportunity to do something similar as catalog access, and that's the distribution of third-party stores through Play. That also involves some technology that doesn't currently --

THE COURT: That's fine. You can fold that in. All right? Just maybe -- we'll have tech day. Okay? So Tech Part A will be -- Catalog Part B will be posting third-party stores.

MR. POMERANTZ: Your Honor, if I could have one moment.

THE COURT: Yeah. Or hosting third-party stores, I should say.

MR. POMERANTZ: And, Your Honor, as part of cataloging -- I think this included -- but as part of catalog access, we would also like to address library porting. That also has technology and economic issues. They couple it with their catalog access. They're together in the proposed remedy.

THE COURT: I think it's less of an antitrust rather than -- that's fine. If you want to put that in, that's fine.

MR. POMERANTZ: Thank you.

THE COURT: But just one and done on tech. That's it. Okay?

So how much time would you like? Well, how much time for your proffer, Mr. Pomerantz?

MR. POMERANTZ: Just one second.

(Pause in proceedings.)

MR. POMERANTZ: Your Honor, if we could have the 60 days instead of 45, that would be --

THE COURT: That's too long. You should be able to do this much more quickly than that. I'll give you 30 days for the proffer. I just can't -- look, it can't be that hard. I mean, it just can't be that hard. So 30 days. Then what? A deposition or --

MR. BORNSTEIN: I think, depending on what this proffer looks like, certainly, at least one deposition. I assume what they're going to do is they're going to give us documents that support what they're saying to us, and they're going to give us a witness who signs a declaration.

And if there are -- obviously, if there are multiple witnesses, we'll need to hear from -- from each of them.

THE COURT: Well, here's what I'm imagining -- and I'll leave it up to you -- but Mr. Pomerantz is going back to

Google, and they're going to ask an engineer to say, "What would you have to do to make catalogs available to third-party app stores? And what would you have to do to handle the library -- to host competing app stores on the Google App in terms of your technology?"

Just can't be that hard. I mean, five engineers, two engineers, one engineer can easily do that in 30 days. That person will be the witness, and then you'll depose that person, and then I guess you'll need to tell Mr. Pomerantz 30 days later, "Here's why we disagree."

And if you have a witness, he'll get to depose him.

So I want to have this done by August at the latest. Okay?

So 30 days for round -- for Google's proffer. 30 days for your response, and then a week for any depositions related to you. You can take -- depose them within a week, and I'll see you back in August, I guess.

MR. BORNSTEIN: And if I could just be clear on the scope of what we're talking about here, because the subject Mr. Pomerantz raised is the technical problems, the engineering.

THE COURT: Yes.

MR. BORNSTEIN: There's obviously been a lot of discussion today about the doom and gloom of security and what's going to happen to users, and I want to make sure that's

actually not what we're talking about on this proffer. We're focusing on the engineering resources that would be required on Google's side to make this happen.

THE COURT: What does Google have to do to make this app store -- slew of app stores available?

MR. BORNSTEIN: Got it.

THE COURT: You know, that kind of a thing.

MR. POMERANTZ: Your Honor, he used the word "technological." Also, the economics of that, so --

THE COURT: If you want to say "It'll cost us $8 billion," which -- whatever. Yeah. How much it costs, that would be fine.

Listen, it's perfectly fine for a monopolist to pay some money. That's not -- the fact that it costs the monopolists some money to fix their wrongdoing, there's nothing wrong with that; it's just if it's unreasonable. That's -- that's the only thing. If it's an unreasonable amount, then I'll take a look at it.

But if it turns out Google has to spend $250,000 to make this work, I don't think I'm going to have a problem with that.

MR. POMERANTZ: Your Honor, a couple of other things, if I may.

THE COURT: Yeah.

MR. POMERANTZ: So the last time we had spoken on this issue, you had deferred the question of further briefing which

we would request --

THE COURT: Further briefing?

MR. POMERANTZ: On the overall remedies. We have not yet submitted briefs on the remedies. We submitted objections, but that's different --

THE COURT: You admitted 90 pages.

MR. POMERANTZ: Your Honor, that was --

THE COURT: How much -- what more could you possibly say? You didn't even have the right --

Well, anyway, go ahead.

MR. POMERANTZ: We would request -- I think there's more that we would say in the form of a brief that you cannot put into the form of an objection.

THE COURT: We'll have closing arguments. Okay? We'll do that. That's going to be -- I don't need any more paper.

I mean, I really doubt there's more that you can say than in 90 pages, but you certainly won't -- at the end of this, probably that same August day, we'll do an hour on tech. I don't think it's going to take anything more than -- as long as this did. This was very important, very useful to me, as I said, and I'm grateful for the economists. Then we'll do closing argument on it. And then I want to get this thing out by, I don't know, Labor Day, maybe.

Forget I said that. I'm going to get it out as soon as I

can -- you know, promptly.

MR. POMERANTZ: Yes. Your Honor, we don't need to decide this today, but I guess I'd like to plant a seed with Your Honor.

THE COURT: Yes.

MR. POMERANTZ: So you're going to obviously write this injunction, and it's complicated and --

THE COURT: Oh, I don't think it will be. Not in a way that you may suggest.

MR. POMERANTZ: No. But I understand, things could creep in inadvertently that you didn't intend, that we could highlight.

Not to reargue anything, but just to look at the way you worded something and point it out to you. So one thing we would ask --

THE COURT: I'm not really inclined to draft by committee, Mr. Pomerantz. So you can take it up on appeal if you don't like it. Okay?

All right. Is that it for today?

MR. BORNSTEIN: Thank you very much for the time, Your Honor.

THE COURT: Thank you. I really want to thank both of you for making this happen, and it was -- I can't say enough how much I appreciated it. Okay?

All right. Thanks a lot.

MR. POMERANTZ: Thank you.

MR. BORNSTEIN: Thank you.

THE CLERK: All rise. Court is in recess.

(Proceedings adjourned at 2:31 p.m.)

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CERTIFICATE OF REPORTER

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

DATE: Friday, May 24, 2024

Ruth Levine Ekhaus, RMR, RDR, FCRR, CSR No. 12219
Official Reporter, U.S. District Court